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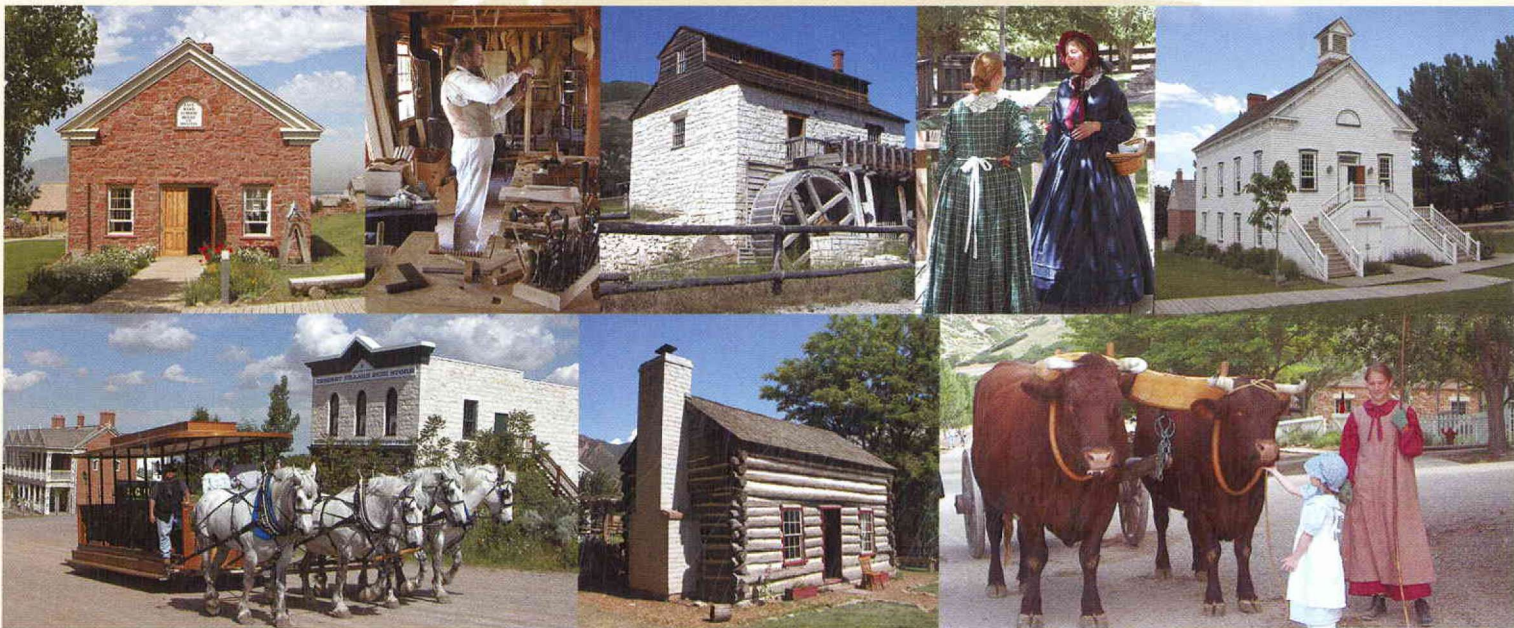
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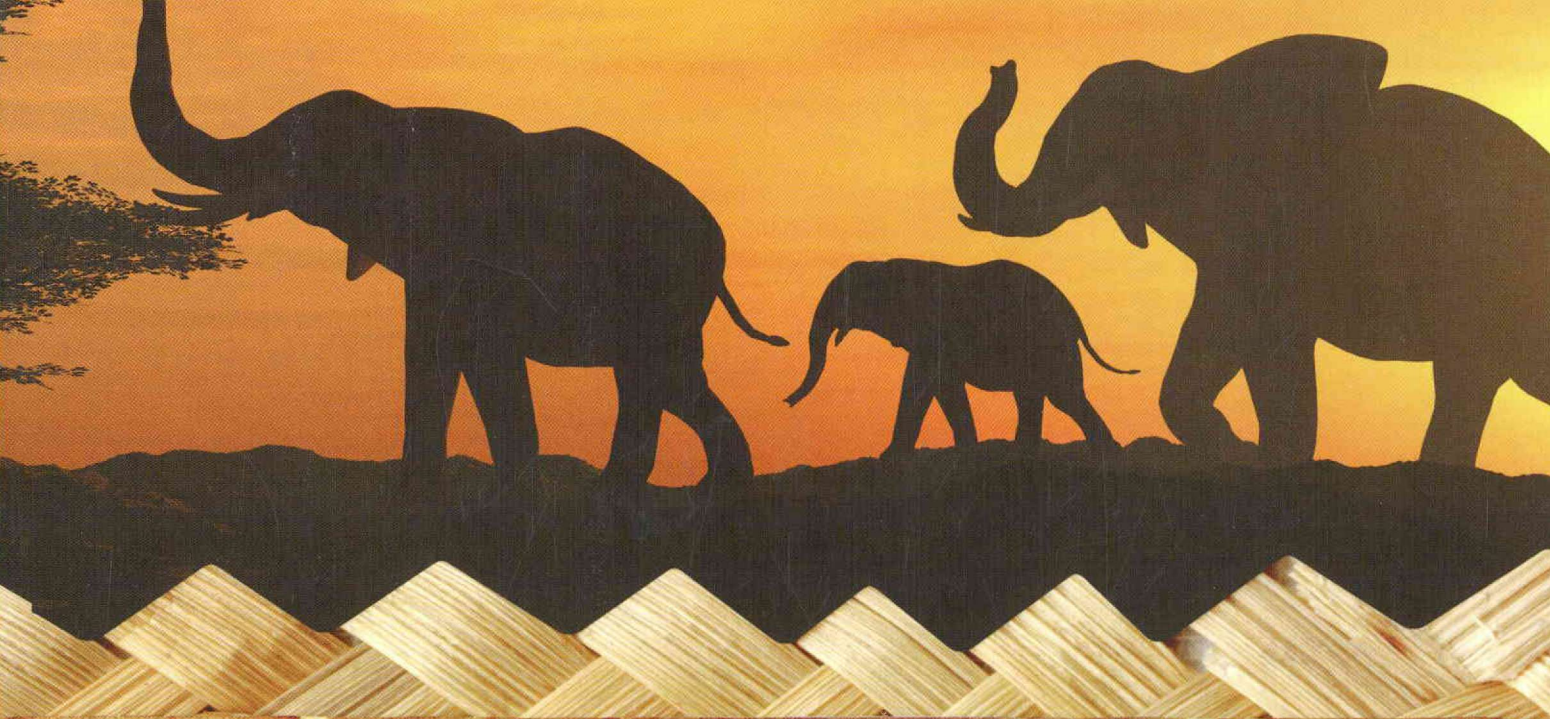
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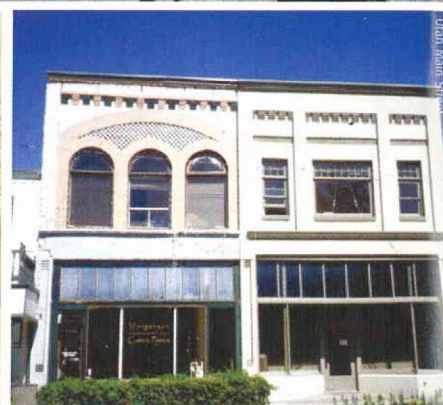
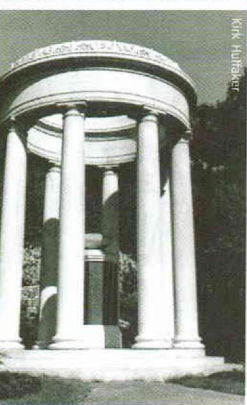


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UTAH PRESERVATION

BUILDING ON THE PAST



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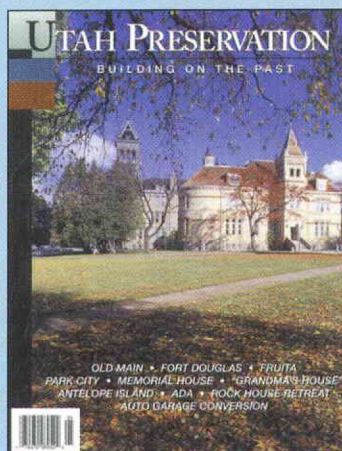
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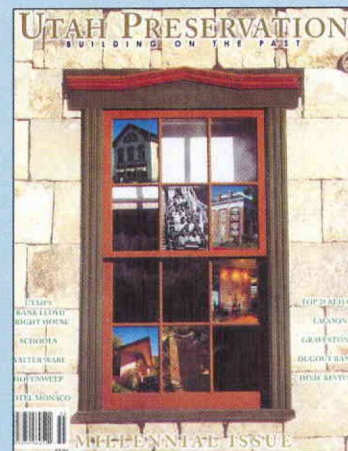
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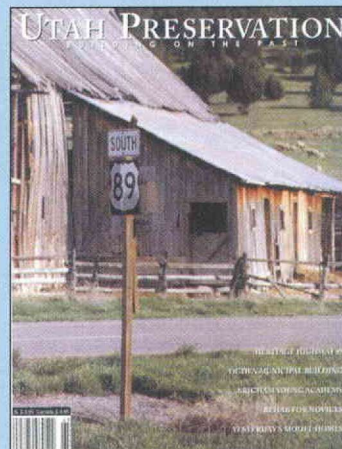
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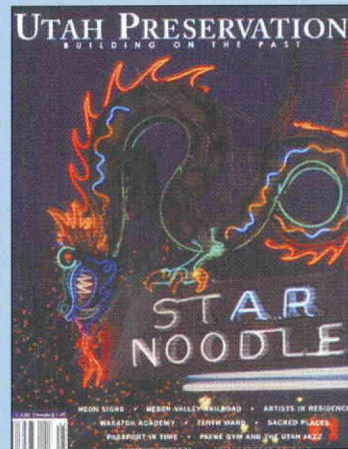
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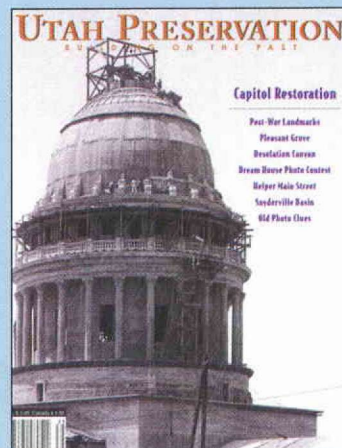
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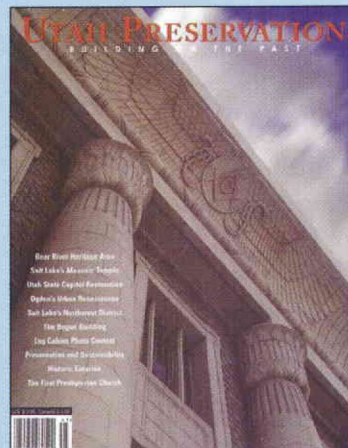
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By Roger Durst

What kind of building would a major construction company want for its headquarters? Perhaps a grand, new building constructed to demonstrate the company's talents? The Big-D Corporation headquarters at 404 West 400 South in Salt Lake City is most certainly a showcase for fine craftsmanship, great design, innovative materials, and the latest technology—all within the framework of an historic building. Big-D's adaptive use of the historic W. P. Fuller Paint Company Building is a remarkable combination of the best that new construction, historic preservation, and environmentally-friendly "green" design have to offer.



The W. P. Fuller Paint Company Building stood underutilized for decades on the prominent corner of 400 South and 400 West in Salt Lake City.

Built to Last

The story of the W. P. Fuller Paint Company Building began in 1849 when W. P. Fuller went to California in search of gold. He found his fortune there, but not in the bottom of a mining pan. Fuller became eminently successful as a purveyor of paint and glass to settlers in the San Francisco Bay Area. After Fuller's death in 1890, his company continued to prosper and soon expanded to many western states. To accommodate its growing paint empire, W. P. Fuller & Company built a regional office and distribution center in Salt Lake City in 1922.

Salt Lake City's W. P. Fuller Paint Company Building was designed by architects at the company's corporate headquarters and constructed by local builders John and Henry Schaven. It was likely the first all-concrete warehouse in the city. Perhaps the heavy losses W. P. Fuller & Company sustained in the 1906 San Francisco earthquake and fire made concrete construction particularly attractive to company leaders. The Fuller Building was unusual at the time because its concrete structure was left exposed rather than hidden behind a veneer of bricks. Its smooth stucco finish and modest Art Deco details gave the building a modern appearance.

The interior of the building was very utilitarian: four floors of open space punctuated by large concrete columns. The office in the southeast corner of the first floor was the only part of the building that was heated. The most decorative feature of the exterior is the tower on the southeast corner that originally housed a water tank. Here the concrete pilasters rise six stories and are adorned with tile and paint in diamond-shaped patterns at the top. The north elevation originally featured a mural of a man in mid-nineteenth century clothes carrying a pickax—probably W. P. Fuller as a robust, albeit unsuccessful, '49er.

W. P. Fuller & Company used the Fuller Building until it sold the structure in 1965. The new owners rented space in the building to a variety of light manufacturing businesses, a pattern which continued for many years. The building's interior was also used for filming movies and television shows, including episodes of *Touched by an Angel* and the feature film *SLC Punk*. In the late 1990s, plans were developed for converting the building to condominiums, but these plans never came to fruition.

A New Vision

In 2003, Big-D Corporation entered the picture. Big-D is one of Utah's premier construction firms and one of the largest commercial builders in the United States. Jack Livingood, chairman and chief executive of Big-D, grew up in the construction industry. From his father, Dee, he acquired great appreciation for the best craft traditions of the industry. He has served as construction manager and consultant, both nationally and internationally, overseeing more than 100 million square feet of construction.

Livingood was looking for a building to adapt as the Big-D corporate headquarters when he visited the Fuller Building. Livingood explained, "I personally love preserving old buildings and I'd been looking for a suitable candidate for a number of years. This building had been waiting 50 years for someone to bring new life into it." As he stood on the building's third level, Livingood envisioned looking down through the space to see and sense the vitality of his staff at work. To make this vision a reality, Big-D and its project managers, Kerry Arnold and Jason O'Dell, combined their considerable capabilities with the talents of David Brems, Dale Berreth, and Justin Jacobs of Gillies Stransky Brems

Smith Architects. The result of this collaboration is a space of great quality and delight.

High Tech Then and Now

Both the original building and the renovated building are products of the best technology of their eras. A 1922 *Salt Lake Tribune* article described the Fuller Building as “the last word in fireproof building science.” In addition to having an all-concrete frame, the building was protected by a system of Grinnell Automatic Fire Extinguisher Nozzles connected to the 15,000 gallon water tank in the tower. Special equipment in the building, including a three-ton crane and two large freight elevators, facilitated the transport and storage of railcar loads of paint, tools, and glass. The building’s internal carrier system moved glass from the top floor, paint from the second floor, and tools from the main floor to truck docks adjacent to 400 South.

In its adaptive use project, Big-D utilized new technologies to create an efficient and healthy workplace. Big-D also used the opportunity of creating its own corporate headquarters to experiment with new products and techniques that more conservative clients might reject. The company encouraged its subcontractors to employ their creativity and finest craftsmanship. The subcontractors responded by devising numerous clever solutions to the problems that inevitably crop up when undertaking a historic rehabilitation.

Big-D adapted the Fuller Building’s simple warehouse interior to promote the social synergy required by an information-driven company. The most dramatic change was the removal of the core of the

building from roof to entry level to create an open atrium capped by a skylight. Space flows from this core to the galleries and perimeter offices. The activity of people in these open spaces, rather than being a distraction, seems to reinforce the focus and enterprise of the company.

An elegantly crafted steel and glass stairway rises through the dramatic atrium. This stunning feature could easily stand alone because of its sculptural quality. The stairway evolved from a series of concepts that ranged from spirals to sculptural concrete. Ultimately the design team decided to use two-inch-thick, diamond-embossed, anti-slip glass treads to allow the full penetration of light in the atrium. A beautifully detailed steel rail in a stringer frame supports the entire assembly, which appears to float upward through the atrium’s open space.

Research on W. P. Fuller & Company revealed an interesting tie between the glass stairway and the company’s past. Among the large variety of glass types offered by the Fuller Company and stored in this warehouse were inch-thick, cast glass steps, coincidentally similar to those Big-D used on the new stairway.

At the top of the atrium are three huge, twelve-foot-diameter, ten-bladed circulating fans manufactured by the Big Ass Fan Company. Under normal conditions, they gently move air through the atrium, and their quiet motion makes you aware of the presence of light. However, in the case of a fire, the fans form a key component of an advanced venting system. Computer-controlled rooftop vents will open at the first sign of smoke and the fans will accelerate to high speeds, moving 300,000 cubic feet per minute out of the building. At this rate, the fans can clear the entire building of smoke in less than two minutes.

In order to sustain the structural integrity of the building after removing much of its core, the designers did not allow any jackhammering or “over-cutting” at the corners where the center slabs were taken out. The concrete cutting subcontractor, A-Core, devised a method of straight-cutting rather than cross-cutting through the concrete, leaving clean corners around the complex edges of the slabs. A-Core’s work is another example of the highly-skilled craftsmanship utilized throughout the project.

The building’s heating, cooling, and lighting systems, though noted as cutting-edge in 1922, were clearly inadequate for contemporary usage. Efficient new heating and air conditioning equipment was incorporated to minimize its exterior visual impact. The distinctive southeast corner tower now hides evaporators and other common rooftop equipment. Rather than being concealed, the interior ducts, pipes, conduit, registers, grilles, and fixtures were carefully crafted to be a part of an integrated design visible throughout the building. Cleverly-designed suspended ceilings, known as “lighting clouds,” afford efficient indirect illumination and soften the acoustics of the interior. All individual office lighting is controlled by motion sensors that automatically turn off fixtures in unused spaces.

Echoes from the Past

Big-D’s rehabilitation of the exterior of the building was no less painstaking than its work on the interior, but not as visually dramatic. The goal here was to preserve the building’s character-defining historic features while creating a distinctive presence for Big-D in the community.

The design team moved the main entrance to the north side of the building to accommodate new parking for employees and visitors. This space welcomes visitors to the building with a new glass and steel entry addition, landscaping steps, and ramps. The form of the addition echoes an historic rail canopy and the swooping footprint of the addition replicates the curves of the tracks of the original rail siding.

Big-D’s logo depicting a muscular construction worker is painted on the blank wall adjacent to the new entrance. The logo replaces the original mural on the north side of a similarly robust ‘49er.

Big-D Corporation



The blank wall on the north elevation of the Fuller Building originally featured a mural of a Gold Rush ‘49er.

Korral Broschinsky



The north elevation now features a mural of Big-D’s construction worker logo and a new entry addition that echoes the building’s historic rail canopy.



The Fuller Building still possessed its original utilitarian interior design when Big-D Corporation purchased it. The four floors of open space and columns offered both challenges and opportunities for the creative design team of Big-D and Gillies Stransky Brems Smith Architects.

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Although Big-D considered a high-tech lighting system for its signs, the company eventually settled on painted ones much like the historic signs. One difference between the old and new murals is the relative sizes of the figures. The '49er occupied much of the original wall. Salt Lake City's sign ordinance, however, did not allow Big-D's construction worker to be quite as large as his historic predecessor.

A major component of the exterior rehabilitation was preserving the building's numerous historic multi-pane, steel sash windows. The design team devised a way to restore the windows' deteriorated steel and incorporate energy-saving insulated glazing barely distinguishable from the original glass. This work required all the building's windows to be removed and trucked to three separate subcontractors, Hadley Brothers Painting, Boman Kemp, and Western Glass, who performed the repairs. Then the windows were re-installed by several specialists coaxed out of retirement by Big-D. This process required a commitment of Big-D's time and resources, but was crucial to maintaining the Fuller Building's historic character.



(Top) Three huge fans at the top of the atrium provide aesthetic interest and play an important role in the building's high-tech smoke evacuation system. (Bottom Left) The complex concrete cutting required to create the huge central atrium and maintain the building's seismic stability is one of the many examples of skilled craftsmanship in the Fuller Building project. (Bottom Right) Glass office walls allow natural light from the exterior windows to reach deep into the interior of the Fuller Building.

Green Preservation

In addition to demonstrating Big-D's dedication to preserving historic resources, the Fuller Building project showcases the company's commitment to preserving our environment. The Fuller Building is one of the first buildings in the nation to earn both LEED (Leadership in Energy Efficient Design) certification and historic rehabilitation tax credits according to the National Park Service, which administers the historic tax credit program in conjunction with the Utah State Historic Preservation Office. The project is being cited on a national level as an example of how to combine "green" design and historic rehabilitation.

The building incorporates a wealth of green features that conserve natural resources and decrease employee emissions. Of the two million pounds of material removed from the building during the rehab, nearly 75 percent was recycled on the site. For example, surplus concrete cut out for the atrium was used as a base for the facility's parking lot. The building's heating and cooling systems use much less energy than average systems. During the spring and fall, outside air and natural evaporation are used to cool the building. During the summer, the advanced systems enable the building to be cooled very efficiently. And during the winter, a boiler not much larger than that of a typical house heats the entire building. Even the paints and finishes, which would make W. P. Fuller proud, were selected for their environmental compatibility. Their low emissions protect air quality and minimize depletion of the ozone layer. This renovated building now achieves a 34 percent higher energy savings than a standard office building on today's market.

Big-D's adaptive use project has not only brought new life to the Fuller Building, but has also contributed to the ongoing revitalization of Salt Lake City's historic warehouse district. Big-D's corporate headquarters draws over 100 employees daily to work, shop, and dine in the neighborhood. Next time you are in the neighborhood, take a moment to stop at the W. P. Fuller Paint Company Building. You're sure to be impressed by the outstanding results of Big-D's thinking big. *

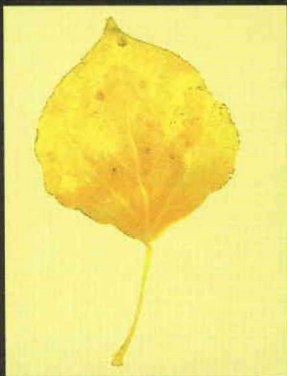
Roger Durst is a graduate of the College of Architecture, Berkeley, California, veteran of the U.S. Navy Civil Engineering Corps, NCARB licensed member of the American Institute of Architects, and a champion of vintage designs. His two heroes are H. H. Richardson and Bernard Maybeck.



Each of the Fuller Building's numerous original steel window frames was carefully removed and sent to a series of three separate subcontractors for repairs.



Diagonal braces were added to the original truck dock door openings on the south elevation to improve the building's seismic resistance.



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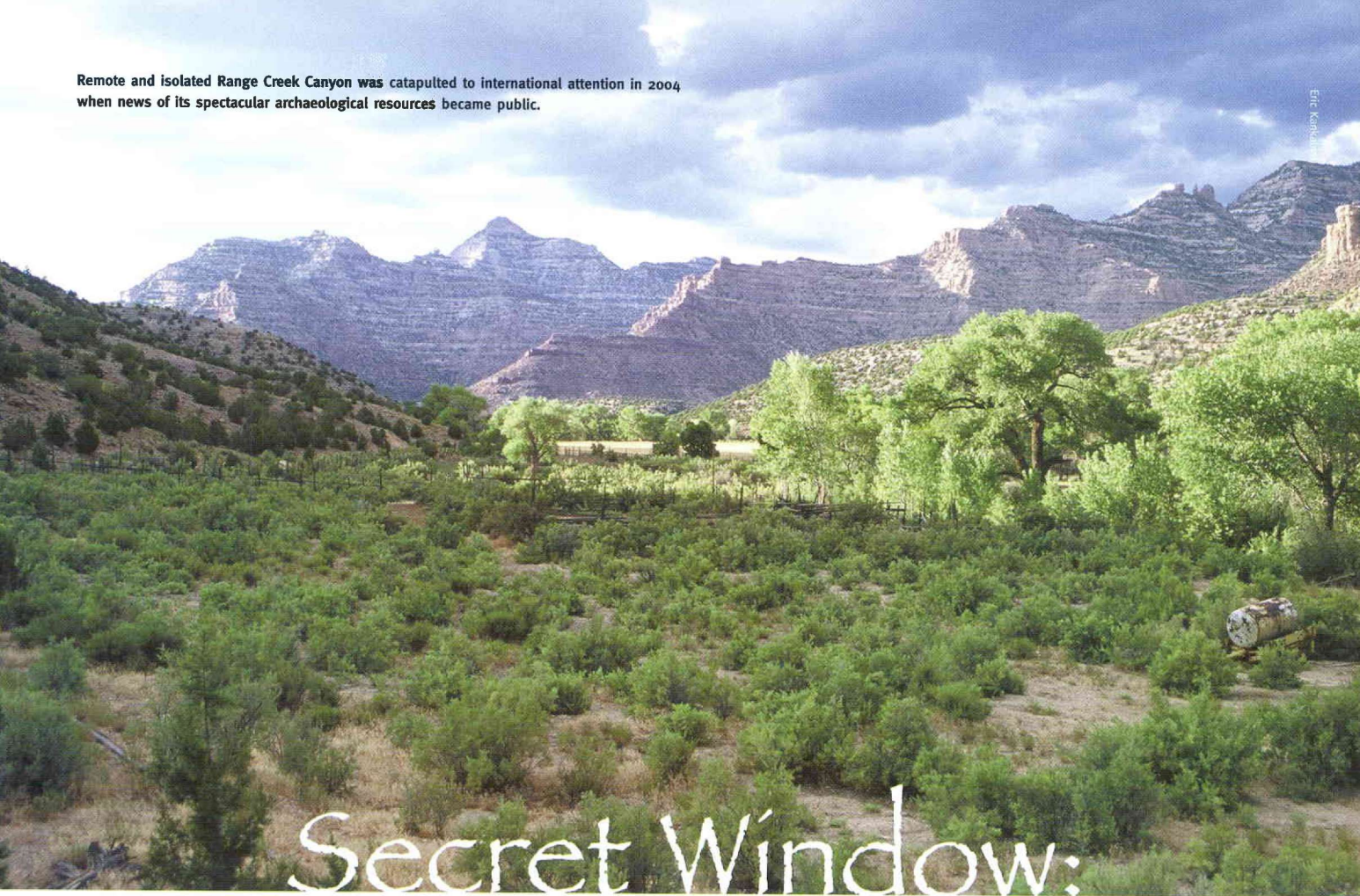


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Remote and isolated Range Creek Canyon was catapulted to international attention in 2004 when news of its spectacular archaeological resources became public.

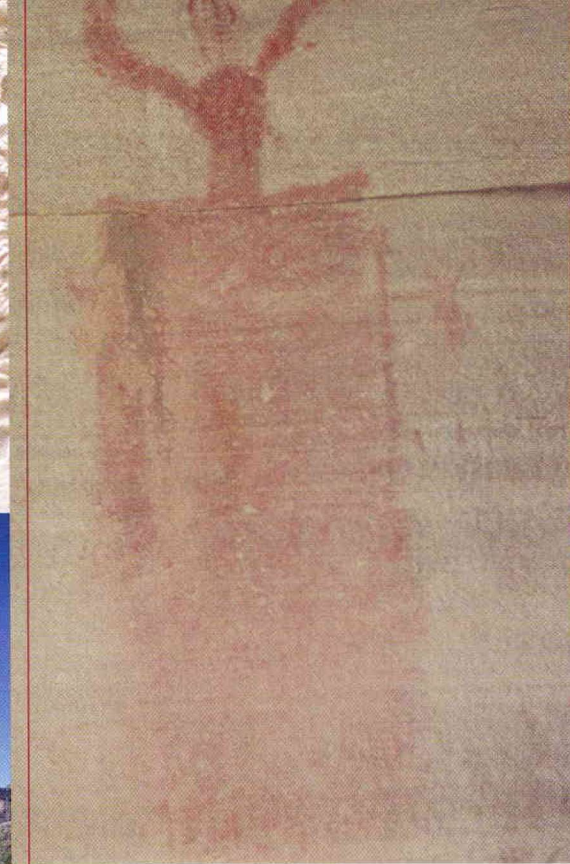
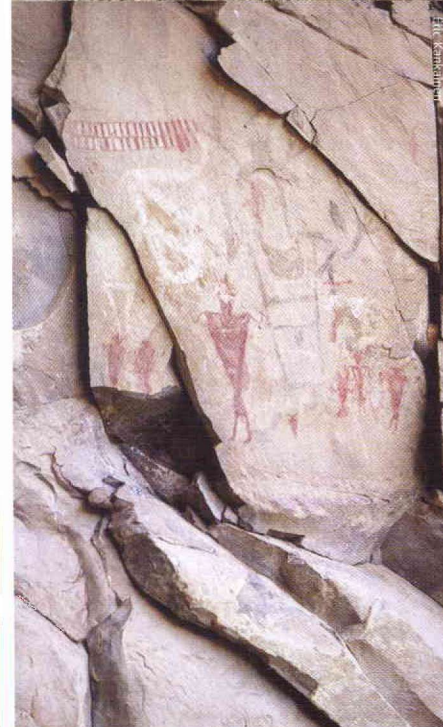
ERIC KARNER



Peeking Into the Mysteries of Range Creek Canyon

THE TAVAPUTS PLATEAU IN EASTERN UTAH IS NOT A PLACE FOR THE TIMID. Largely devoid of water but for a few small streams that ribbon through seemingly impenetrable canyon walls, the region is the epitome of desolation—a fiery furnace in the summer, bone-chilling cold in the winter. In 1931, it was a virtual no-man’s land, unexplored except by a handful of hardy cowboys and homesteading dreamers. It must have seemed an unlikely region to yield much evidence of prehistoric humans when intrepid explorers from Harvard University arrived at the Pace Ranch in lower Nine Mile Canyon in late July 1931.

BY JERRY D. SPANGLER AND DONNA KEMP SPANGLER



(Top) This platform clinging to a canyon wall includes wood framing with a stone slab on top. It likely supported a granary.

(Middle) Waldo Wilcox's stewardship of Range Creek Canyon preserved hundreds of Fremont pithouse sites from looters.

(Bottom) Rock art panels painted 800 years ago still glow with vibrant color in Range Creek.

Nine Mile Canyon was a verdant exception in this rugged wilderness. Antiquarians had been buzzing about Nine Mile Canyon, with its endless galleries of prehistoric rock art, since the 1890s. But the vast majority of the Tavaputs remained unexplored, firing expectations that another Mesa Verde or Chaco Canyon awaited discovery deep in the wilds.

On August 2, 1931, William Bowers, James Dennison, and Waldo Forbes saddled up for a two-week pack trip through canyons to the south of Nine Mile Canyon, in particular, to a place called Range Creek where two remote ranches had been established, but archaeologists had never ventured. During their two weeks in Range Creek and Desolation Canyon, the men were decidedly underwhelmed by what they saw, writing that there was nothing particularly remarkable, nothing spectacular or grand. And perhaps because of those words, Range Creek was, for the most part, ignored by later generations of archaeologists who were repelled by the canyon's rugged isolation.

That veil of isolation lifted in 2002 when Waldo Wilcox, the last of the full-time ranchers in the canyon, decided to sell his land in a complicated deal whereby the ranch was first sold to the Trust for Public Lands, then to the federal government, and finally to the State of Utah through legislation sponsored by Representative Jim Hansen and Senator Bob Bennett. Prior to transferring title to the state, the Bureau of Land Management wanted some idea of the archaeological resources to be found there. Were the sites few and scattered, as the 1931 Harvard archaeologists had written? Was there anything to those rumors that persisted in Carbon and Emery Counties that the canyon was home to spectacular ruins?

The Harvard Boys were Wrong

Almost 71 years to the day that Bowers, Dennison, and Forbes ventured into the canyon, Wilcox—the one man who knew better than any other the undiscovered archaeologi-



Intact granaries are among the exciting discoveries in Range Creek. The lid on this rock and mortar granary was sealed by a Fremont farmer hundreds of years ago.

cal treasures of Range Creek—spent the day with us and Dr. Duncan Metcalfe, curator of archaeology for the Utah Museum of Natural History, driving down a gut-wrenching ranch road, stopping to point out areas where archaeological sites were located. From time to time, Wilcox would march us off to show us something just out of view from the road.

What we saw was jaw-dropping astounding. Yes, the pole granaries we had read about were still there and the rock art was visually impressive. But we were stunned by the sheer number of pithouse sites—prehistoric residences defined by circles of stones and boulders—sometimes in isolation, other times in clusters of four to six on ridges and knolls above the floodplain. In fact, the density of the Fremont occupation here exceeded anything we had seen before, even that of Nine Mile Canyon.

Even more remarkable was that none of the sites showed any evidence of vandalism. There were no looters' holes, no trash left behind by curiosity seekers, no graffiti on the rock art, nothing to suggest they had been touched in a millennium. Potsherds and arrowheads and grinding stones littered the ground. "In 25 years of archaeology in Utah, I can think of fewer than ten sites that had not been looted to some extent," Metcalfe

said. "In Range Creek, we are talking about hundreds and hundreds of pristine sites. It is more than remarkable. It is the opportunity of a lifetime." State archaeologist Kevin Jones, who has been involved in the project from the beginning, agrees. He points out that many other places in the West have rock art and pithouses and granaries, but most have been damaged over the years. "That's what makes this place so unique," he said.

Without a doubt, Waldo Wilcox deserves accolades for protecting Range Creek Canyon. He not only kept out the curious and malicious, he also instilled a preservation ethic in his family, one passed down to him by his father, Budge. "It did not belong to us. If those people wanted to leave their things there, I thought we should leave them alone," Wilcox told *Archaeology Magazine*.

The Key to Challenging Questions?

It is hard for those of us involved in the project not to speak in superlatives when describing Range Creek Canyon and what it means to the science of archaeology. "This is one of the most significant sites in North America," Jones told the *Rocky Mountain*

News. Metcalfe boasts it is among the most important archaeological discoveries of the past half century. Range Creek even made *Discover Magazine's* list of the 100 most important scientific discoveries of the year.

Collectively, these unspoiled sites offer researchers an unprecedented opportunity to unleash the latest archaeological technology and theories on some of the most vexing questions surrounding the prehistory of the northern Colorado Plateau. How did the prehistoric Fremont farmers in Range Creek—perhaps a community numbering dozens, if not hundreds—thrive in an arid environment that in modern times could not support more than one or two families at a time? What happened in the A.D. 1200s to cause the entire social structure, built upon centuries of adaptability to the vagaries of climate and competition, to collapse?

Almost all of the evidence gathered so far points to a robust occupation of Range Creek by Fremont peoples between about A.D. 1000 and 1300, the same time frame when nearby Nine Mile Canyon was most intensively occupied. These people were farmers who also hunted deer, bighorn sheep, elk, and smaller animals, and collected wild plants like berries, pine nuts, and grass seeds.

The Fremont thrived throughout Utah north of the Colorado River, extending into western Nevada, northwestern Colorado, and southwestern Wyoming. The defining trait of the Fremont was their adaptability to local environments, shifting easily from farming domesticated plants to foraging for wild foods as conditions warranted. Archaeologists debate fiercely whether the Fremont peoples were primarily farmers who supplemented their corn, beans, and squash with occasional wild plants and animals, or if they were primarily hunters and gatherers who dabbled a bit in farming.

Despite Fremont peoples' remarkable adaptability, farming as a component of Fremont life appears to have disappeared by about A.D. 1250 to 1300. Could it be that Range Creek represents a "last stand" for a large group of Fremont farmers besieged by persistent drought and hostile, hungry neighbors?

Knowledge Sealed in Pithouses and Granaries

That is but one question facing researchers as they seek to unravel the mysteries of Range Creek. There are myriad more. For example, the pithouses in Range Creek represent an opportunity to study day-to-day activities of

prehistoric peoples. In the Tavaputs Plateau area, the Fremont would typically dig into the shale soils to establish a floor area three feet or more below the surface. The inside of the pit was lined with slabs, and then stone walls were arranged in a circular pattern above ground, creating a house that was partly below ground and partly above. A roof of wooden beams covered with mud and thatch was then placed over the walls to create living quarters that would be warm in the winter.

Over the centuries, the roofs collapsed, sealing inside all the evidence of day-to-day life, at least until the looters shovel through in search of artifacts. In Range Creek, these pithouses remain sealed, and the information they contain is like a library of books with the answers to many different mysteries about how people lived together and how they adapted to changing circumstances. Were these pithouses winter residences or year-round homes? Were they single-family homes or were some of the larger ones, those up to 30 feet in diameter, for extended families? Were they even residences at all or were they community structures? What was the size of the Fremont community and how was their society structured?

Archaeologists are particularly excited about the granaries because how and why human beings store food tells a lot about

the society as a whole. If they store food in chambers next to their homes, it suggests they are present at least most of the time to protect the food from pests, both animal and human. If they hide it away or make it difficult for anyone or anything to get to, it suggests they weren't always around to protect their food or seeds for next year's planting. In Range Creek, both types of storage strategies are evident.

Literally hundreds of granaries have been identified, some as small as a bread basket, others massive chambers perched on cliff ledges hundreds of feet above the valley floor and virtually inaccessible except by technical climbers with ropes. Some have remnants of corn and at least one was full of wild rye seeds. Many, if not most, exhibit a tremendous expenditure of energy to build storage chambers in situations where any attempt to raid the stores would involve risk to life and limb. "People would not go to this kind of trouble if they weren't afraid," Jones said.

There is another line of evidence suggesting the Range Creek farmers were in fear for their lives. At Wilcox's suggestion, university students embarked on a grueling hike to a ridge about 1,000 feet above the valley floor. Thwarted by vertical cliff faces and precipitous drops, the students took hours to reach the ridge, but once there they found evidence

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(Top) A new gate is part of efforts to protect the archaeological treasures of Range Creek from looters and vandals. (Bottom) A view down Little Horse Canyon toward the rugged terrain of Range Creek.



of pithouses, food processing tools, and pottery. What they did not find was water. In other words, some individuals were living high above the valley floor, with a daily commute to and from their fields involving many hours. They would have to carry jugs of water on trails where one false step or stumble would mean certain death. Could this site, dubbed Deluxe Apartment in the Sky, have been a refuge? And what's more, Wilcox has pointed out other sites located in even more precarious settings.

Anasazi Ties?

But who were they afraid of? It is a question that strikes at the long-running debate among Fremont scholars over what became of the Fremont generally. Were they afraid of other Fremont groups, say their neighbors in Nine Mile Canyon or the San Rafael Swell, whose populations had become too large at the same time drought made farming an unpredictable way of life? Or was it new arrivals, maybe the ancestors of the Utes and Paiutes, who began arriving about A.D. 1100? Or was it some other group, maybe even the Anasazi to the south?

The latter question is particularly interesting because Anasazi potsherds—black-on-white, black-on-red, and polychromes from regions hundreds of miles away—are quite common in Range Creek, even though everything else shouts “Fremont.” It has long been thought that the two groups didn’t interact much. Could it be that the two groups did, in fact, trade with each other? Could they have lived together? And if they did, what was the relationship between the two? Was it purely economical? Was it adversarial? Were the Anasazi and Fremont related by intermarriage or language? Archaeologists are fond of saying that no one can pick up a potsherd or an arrowhead and tell what language its maker spoke. But in Range Creek, the evidence is whispering a caution to researchers that the Fremont social and economic networks may be a lot more complicated than anyone ever considered.

(Left) A latch secured with a leather strap seals the door of an outbuilding on the historic Wilcox Ranch.

(Top) This pithouse is part of a village located on the canyon floor near the stream. Most of Range Creek’s pithouses are located higher on canyon benches.

(Bottom) Many of the pithouses and granaries in Range Creek are built in inaccessible locations. These granaries are reached along a talus slope with cliffs above and below.

Eric Kantakainen



Eric Kantakainen



Eric Kantakainen



Range Creek includes important historical as well as archaeological resources, such as these historic cabins where the Wilcox family lived as late as the 1930s. The building on the right features an unusual sod roof.

Research for Many Disciplines

Without a doubt, most scientific attention is currently focused on the remarkable prehistory of Range Creek. But the canyon also holds tremendous historic resources that contribute to our understanding of ranching in a harsh desert environment that thwarted the most determined homesteaders, the battles between cattle barons and family farmers, and even glimpses into outlaws, deserters, and shadowy characters drawn to this remote refuge. Historian Steve Gerber, who has family roots in Range Creek, has been working with archaeologists to document the remains of these sites—stone cabins, outbuildings, and even a hay derrick reportedly built by an African American soldier from Ft. Duchesne—as he attempts to reconstruct eastern Utah’s ranch life in the late 1800s and early 1900s. “It is a microcosm of the story of westward expansion and Utah politics of the nineteenth century,” Gerber said.

Those involved in the Range Creek Archaeological Project envision a grand outdoor laboratory—a research station patterned on the model created by the University of California—that would draw many different scientific disciplines: paleontology, wildlife biology, ecology, geomorphology, climatology,

and botany, to name a few. Working together, scientists attempting to understand the Range Creek ecosystem could better help archaeologists understand the natural environment and how humans could have responded to the limitations imposed by this environment.

Now the World Knows

With Range Creek exuding scientific potential at every turn of the rutted road, the most daunting task facing Metcalfe, Jones, and their partners at the Utah Division of Wildlife Resources (the state agency charged with managing the canyon) is how to preserve Range Creek for future generations. Researchers had hoped to keep the project secret long enough to document, map, and photograph sites. But word leaked out in the summer of 2004, and scores of national and international media soon descended on Price for a glimpse. A flood of newspaper, magazine, and television stories ensued, with every major news organization in the country chiming in on the wonders and scientific potential of Range Creek. A Google search of “Range Creek archaeology” now reveals more than 95,000 hits.

The media attention, however, has accentuated the concerns shared by all the partners that Range Creek is too unique and fragile a resource to squander. And there is growing concern the sites will be targeted by professional artifact collectors seeking a pot or figurine to sell on eBay. Through a special appropriation by the Utah State Legislature, Wildlife Resources has beefed up its law enforcement presence in the canyon. A full-time ranch manager also patrols the canyon daily to remind visitors of the rules against collecting artifacts and damaging sites.

Wilcox has seen what pothunters have done to lands outside his locked gate and he has no doubt the sites in Range Creek will be plundered if not for careful stewardship. “I’m afraid the public will ruin it,” he told *USA Today*. “You’ll be awfully lucky if there’s anything here for your kids.” As the principal parties move forward with the development of a management plan for the canyon, they are of one mind that preserving Range Creek will take a lot more than luck. It will take an unprecedented level of commitment from every stakeholder to ensure Range Creek remains a treasure for all Utahns and a legacy worthy of passing to future generations. *

Jerry and Donna Spangler own Uinta Research, a private consulting firm dedicated to the preservation of Utah’s cultural resources. Jerry is also an adjunct instructor of archaeology at the College of Eastern Utah. Both are also professional journalists living in the Washington, D.C. area.



Populist Preservation:

Reflections on the Success of Utah's Main Street Program / By Bim Oliver

In the world of preservation, the Main Street Program has always been something of a different animal. While preservation has traditionally belonged to small groups of highly-dedicated volunteers, Main Street has involved a broad range of people who would hardly call themselves “preservationists.” As Randall Shepard, Trustee Emeritus for the National Trust for Historic Preservation, recently observed, “Main Street has brought the message of preservation and put it to work in more places, involving more Americans, than any other effort in the entire history of the National Trust.”



(Left) The “modernization” of the Croft Building on Midvale’s historic Main Street included removing the original storefront on the main level and covering the upper level with metal siding. (Center) The owner was encouraged to rehabilitate his building when Midvale City improved the appearance of Main Street. (Right) The brick details and original window openings were restored on the upper level. The storefront was recreated to resemble a common storefront from the period when the building was constructed.

Here in Utah, the Main Street Program has taken this Johnny Appleseed approach to spreading the message of preservation since 1993. In my 12 years as the Utah Main Street coordinator, I have traveled to nearly 100 communities around the state to talk with property owners, merchants, city officials, and citizens about working collectively to preserve and sustain their historic downtowns. It is safe to say that many, if not most, of these people have never been involved in an initiative, or even a project, related to historic preservation.

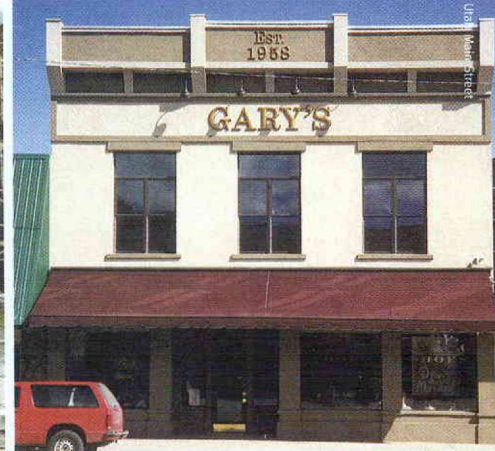
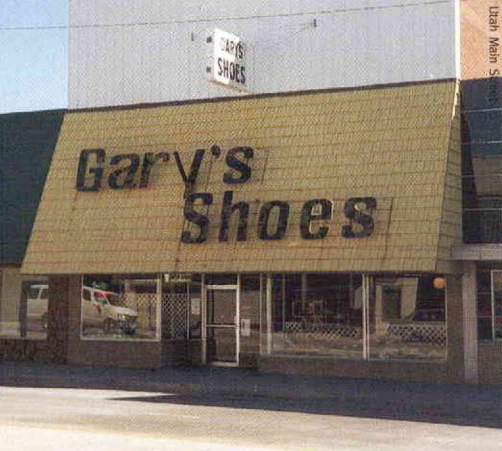
But where Main Street differs most from traditional preservation lies more in the how than in the who. While preservation efforts typically focus on restoring specific sites or compiling research, local Main Street organizations tackle entire districts. In fact, the “Main Street approach” was developed 25 years ago by the National Trust for Historic Preservation as a comprehensive, holistic strategy for preserving a community’s historic commercial architecture by addressing the complex dynamics of downtown. Local Main Street organizations are like development companies with capabilities in design, marketing, and business development. This effort has been so successful nationally that National Trust President Richard Moe called the Main Street approach “one of most successful economic revitalization programs in America.” Note the absence of the word “preservation” in his remark.

Creating a Distinctive Business Identity

So it shouldn’t be a surprise that “preservation” is often in the background, at least initially, when we talk with communities about how to revitalize their downtowns. One of our early goals is to encourage property owners to rehabilitate their buildings and restore their historic character. But most property owners have not purchased (or inherited) their buildings for their historic value. Most of them are simply looking to maximize their building’s value as commercial space, regardless of whether the building looks “historic” or “modern” or something in between.

This mindset explains the inappropriate and sometimes downright bizarre treatments historic downtown buildings have been subjected to as property owners seek to adopt the “look du jour”—everything from aluminum siding to barn wood to sectional plastic—in a misguided attempt to enhance the marketability of their buildings.

Rather than focusing on history for history’s sake, we focus on the practical, commercial value of restoring a building’s historic character. We encourage property owners to rehabilitate their buildings in order to: enhance their marketability, mitigate the damage caused by inappropriate modifications, restore functional elements compromised by inappropriate modifications, and establish a distinctive identity for businesses occupying a building.



(Left) Gary's Shoes was the victim of several modernizations. First, the original architectural details were stripped away and the masonry was covered with stucco. Later, the facade was completely covered with metal siding and a billboard-scale mansard roof. (Center) The first layer of stucco couldn't be removed without seriously damaging the masonry, so the building's owner created a new facade that harkens back to the original.

(Right) He also installed traditional fabric awning to limit ultra-violet damage to merchandise in the display windows.

Again, note the absence of "preservation" or "historic" in these objectives. It isn't that we're afraid to broach the subject. In fact, the architects with whom I have worked, Don Hartley of the Utah Division of State History and Kim Hyatt of Kim Hyatt Architects, are articulate and compelling in their arguments for preservation. But in working with people who are not "tuned in" to preservation, we come at it from a different direction.

Scott Jensen is a good example. Scott owns Gary's Shoes, a successful family-owned business in downtown Richfield. Like many downtown buildings, Scott's had been "modernized" at some point. The facade was covered in aluminum and stucco, and the sign on the storefront was out of scale for a downtown context. Scott decided to remodel his building after attending a workshop I conducted in Richfield. Scott is a savvy business owner who is always exploring new opportunities to increase business activity. A remodel represented just such an opportunity.

Scott consulted with us about his design options and we discussed the value of restoring the building's historic character. As a business owner, he was particularly interested in establishing a distinctive identity for Gary's Shoes. Using historic photos as a guide, Scott reconstructed the building's facade. (Unfortunately, most of the building's original material had been destroyed over the years.) His project resulted in dramatic aesthetic and economic change. Scott's sales have increased significantly and his building now serves as an example for other property owners in Richfield.

Simple Efforts with Big Returns

Scott's project, while extremely successful, is not a typical Main Street project. Most of the dozens of building rehabilitations I have seen over the past 12 years would not be considered "preservation" in the strict sense of the word. In fact, it is rare that a downtown commercial building is lovingly restored to its original condition. Herein lies a key distinction between the Main Street approach and more traditional preservation strategies.

Most historic commercial buildings have undergone some sort of remodel that has diminished their historic character. To make matters worse, many of these remodels have not been maintained so the buildings appear tired and dilapidated. They just don't look like they're worth investing in. Thus, most downtown property owners are unaware of the value of their buildings as historic places.

Because these buildings serve a commercial purpose, any remodel has to be financially justifiable. The basic proposition for most downtown property owners is: How can I maximize my rent while minimizing my investment? Therefore, most of the rehabilitation projects

Utah Main Street has participated in are relatively simple, incremental efforts. Our goal is to encourage the building owner to restore the building to a condition that is as close to its historic character as we can get. (Scott Jensen, of course, went well beyond that standard.)

In order to promote this goal, Utah Main Street and the Division of State History at one time offered matching grants to stimulate rehabilitation projects in downtowns across the state. A 2003 economic analysis of this program provided us with a powerful argument that preservation makes great economic sense. While the average cost of a project was only \$12,000, the average project generated nearly \$12 in economic impacts for each dollar invested. This return is all the more impressive considering the small size and lack of economic activity in the downtowns where many of these projects took place.

These results demonstrate National Trust President Richard Moe's point: Main Street is a successful economic revitalization program. Preservation is the lynchpin of the effort, but we've learned that sustaining a downtown architecturally depends on sustaining it economically. It also depends on creating a broad-based, community-wide effort. Utah Main Street has accomplished just the kind of populist preservation Randall Shepard described. Local Main Street organizations have expanded not only the numbers, but also the types of people who are getting involved in preservation.

Bringing New Issues to the Preservation Table

Main Street initiatives have also expanded the preservation agenda by addressing issues the preservation community previously saw as peripheral or unrelated. Infill development, for example, has become a key aspect of downtown revitalization. As a case in point, the Logan Downtown Alliance worked extensively with Cache County on the design of a new county administration building that would complement Logan's existing downtown context.

Like Main Street programs nationally, the Utah Main Street Program has also stimulated local discussions about preserving community character and identity through "smart growth." For example, Richfield has challenged the U.S. Postal Service to maintain its downtown post office rather than moving it to the edge of town, both to stem dispersed "sprawl" development and to retain the post office as a downtown anchor. And Heber City recently commissioned an analysis of the potential impacts of a proposed large-scale shopping center on local businesses and passed a zoning ordinance that allows the community to manage the size and scale of new commercial development.



(Left) Casey's Cafe in Mt. Pleasant is typical of many of Main Street rehabilitation projects. The owner removed dilapidated, "maintenance-free" materials installed in the 1950's and 60's to reveal original architectural features. (Right) The original features were then refurbished and painted in an appropriate historic paint scheme to show-off the unique architecture.



Some preservationists might argue that these cases don't exemplify "preservation," but I believe they demonstrate Main Street's success as a preservation program. Because of its comprehensive nature, the Main Street approach addresses downtown revitalization holistically. The natural extension is to address community development holistically. So, just as Main Street has expanded the roster of preservationists, it has also expanded the geography of preservation.

What's most encouraging to me is that more and more Utahns in more and more places are speaking the language of "smart growth" and, by association, of preservation. They may not realize it, but they are. They are talking about sustaining community character and identity. They are challenging the value of development principles and practices that lead to sprawl. And they are focusing on saving the special places. Perhaps Utah Main Street's greatest success is that it has served as a catalyst to stimulate collective conversations about community character and has helped to convert these discussions into action. *

Since 1993, Bim Oliver has been the state coordinator for the Utah Pioneer Communities/Main Street Program. Prior to assuming his current position, Bim worked in the Governor's Office of Planning and Budget as a planning and budget analyst. Originally from Virginia, Bim obtained degrees from the University of Virginia, West Chester University, and the University of Utah.

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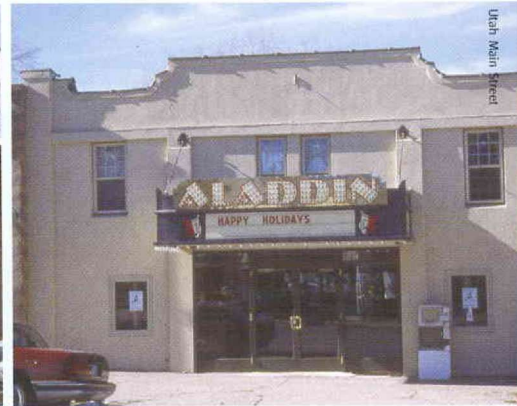
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(Left) Though the facade of the Aladdin Theater in Parowan was covered with residential aluminum siding, many of its original architectural details were left intact underneath. (Center) The theater's facade was refurbished using original photos and extant details as a guide. (Right) A new marquee, designed in the spirit of the original marquee, was installed to highlight this important rehabilitation on Parowan's Main Street.



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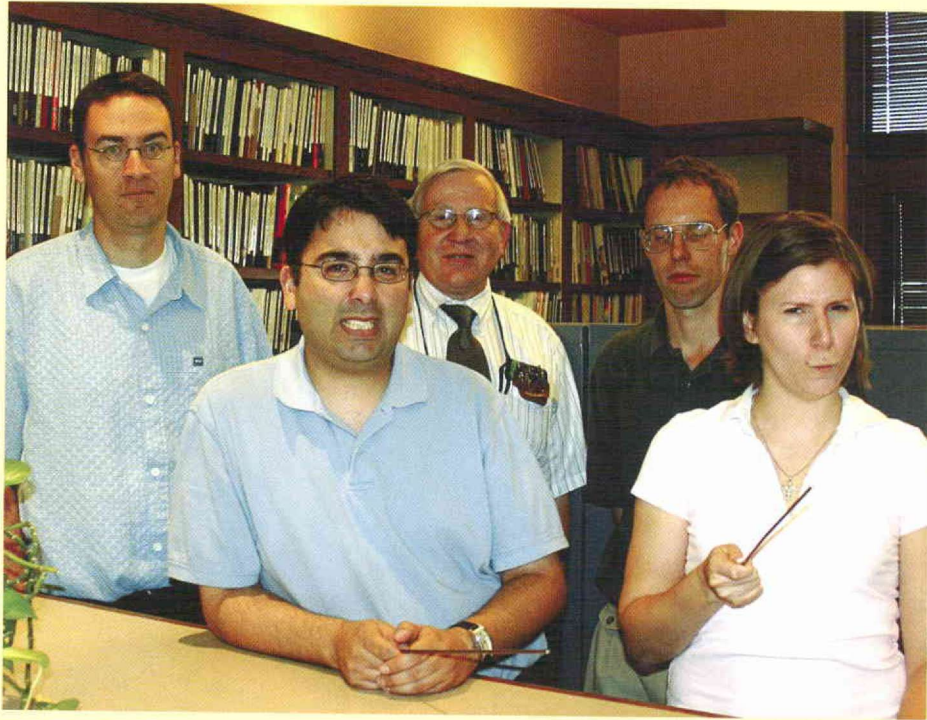
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Based in Salt Lake City, Utah, Daniel Peterson & Co. has successfully completed conservation, restoration, and decorative projects in nine countries.

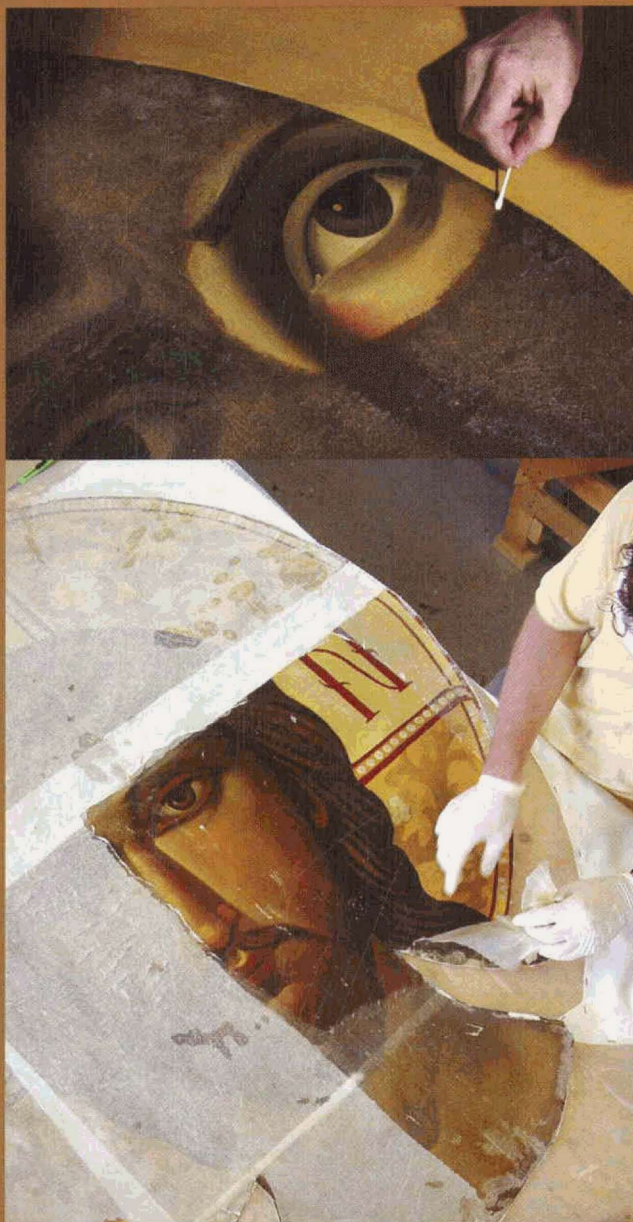
In addition to field projects, the Salt Lake studio has produced designs for carpets, wall covering, art glass and various architectural details in wood and plaster. Studio conservation projects include furniture and object, with an emphasis on painted and gilded ornament. Other services include the writing of specifications, project documentation, project management and consultation.

I would like to invite architects, designers, and related professionals to see "what we've done, what we're doing, and most importantly, what we would like to do in the future." Peterson adds, "I hope to open a dialogue with people who are active in the contemporary market to see how this traditional trade can be re-integrated into a 'contemporary' context. From tomb painting in Egypt to post-modern distressing and patinating in the 90's, this trade has evolved and survived. The craft is not dead; we just need to continually redefine the relevance of decorative painting to contemporary design in institutional, commercial, and residential contexts."

"My focus on preservation has expanded out of necessity to include preservation of the craft, as well as surface," says Peterson. "It is a perpetual learning process that I find both challenging and humbling, and I hope some day to produce quality worthy of the 'eminent late greats' of the trade."

Recent local projects include an investigation and cleaning of the dome mural in the Utah State Capitol rotunda and restoration of icons in the Holy Trinity Greek Orthodox Church.

Peterson and his staff of artisans are currently at work on decorative and mural projects around the country, preserving existing historical works and installing original painted ornament.



(Top) The eye of Christ appears from under a layer of 60 year old paint. This icon was discovered beneath another icon, and is being conserved for display in a museum.

(Bottom) Mulberry paper being carefully removed from an icon that was taken down from a plaster dome. This icon is being restored for reinstallation in Holy Trinity Church.

Rethinking Archaeology:

Scientists, Native Americans, and Communities Collaborate to Protect Priceless Landscapes in San Juan County

By Adrienne Babbitt



Kelly Rigby

In Butler Wash in southeastern Utah, it doesn't take long for Bureau of Land Management (BLM) archaeologist Nancy Shearin to find a small piece of a stone tool more than 1500 years old lying on the ground.

Ancient Indian ruins atop Cedar Mesa frame the majestic features of Comb Ridge in the distance.

"We're standing right where an ancient pit house would have once been," said Shearin, pointing to a sage-spotted gully with a few rocks toppled about. "This rugged landscape has a rich human story to tell, but few people realize it."

Less than an hour from both Blanding and Bluff, Comb Ridge and its fertile drainages, Comb Wash and Butler Wash, have been both an attraction and an obstacle to humans for thousands of years. Dating back as early as 1500 B.C., ancient civilizations of ancestral Puebloan people built flourishing communities in this desert oasis. For centuries, the region supported more people than live there today—complex societies with irrigated farms and even a prehistoric road system. Hundreds of years later, Mormon pioneers braved the Comb's arduous terrain while blazing the "Hole in the Rock Trail."

Resources at Risk

Today Comb Ridge is presenting new challenges. To the dismay of archaeologists, community members, and Native Americans, much of the last surviving evidence of these past cultures is being walked on, ridden over, and carried away. "It used to be that the locations of these sites were known only by locals and archaeologists who've studied them," said Shearin. "Now back-country guidebooks and the Internet make directions, photographs, and even GPS locations available to everyone, and many visitors are inadvertently damaging these places."

As Shearin explains, the casual collecting of artifacts is one of the greatest threats to the archaeological record. "Once taken out of context, the value of these artifacts is greatly diminished. To the visitor 'it's just one pottery shard,' but each piece taken away strips the landscape of the only record we have of these people."

Researchers and land managers hope the behavior of visitors will soon change. As part of the 2006 Centennial Celebration of the Antiquities Act (the first act to protect archaeological sites and artifacts on federal lands), the BLM and the University of Colorado will join with Native American tribes and other community partners to conduct a comprehensive survey of the Comb Ridge area and educate the public about how to treat these priceless resources.

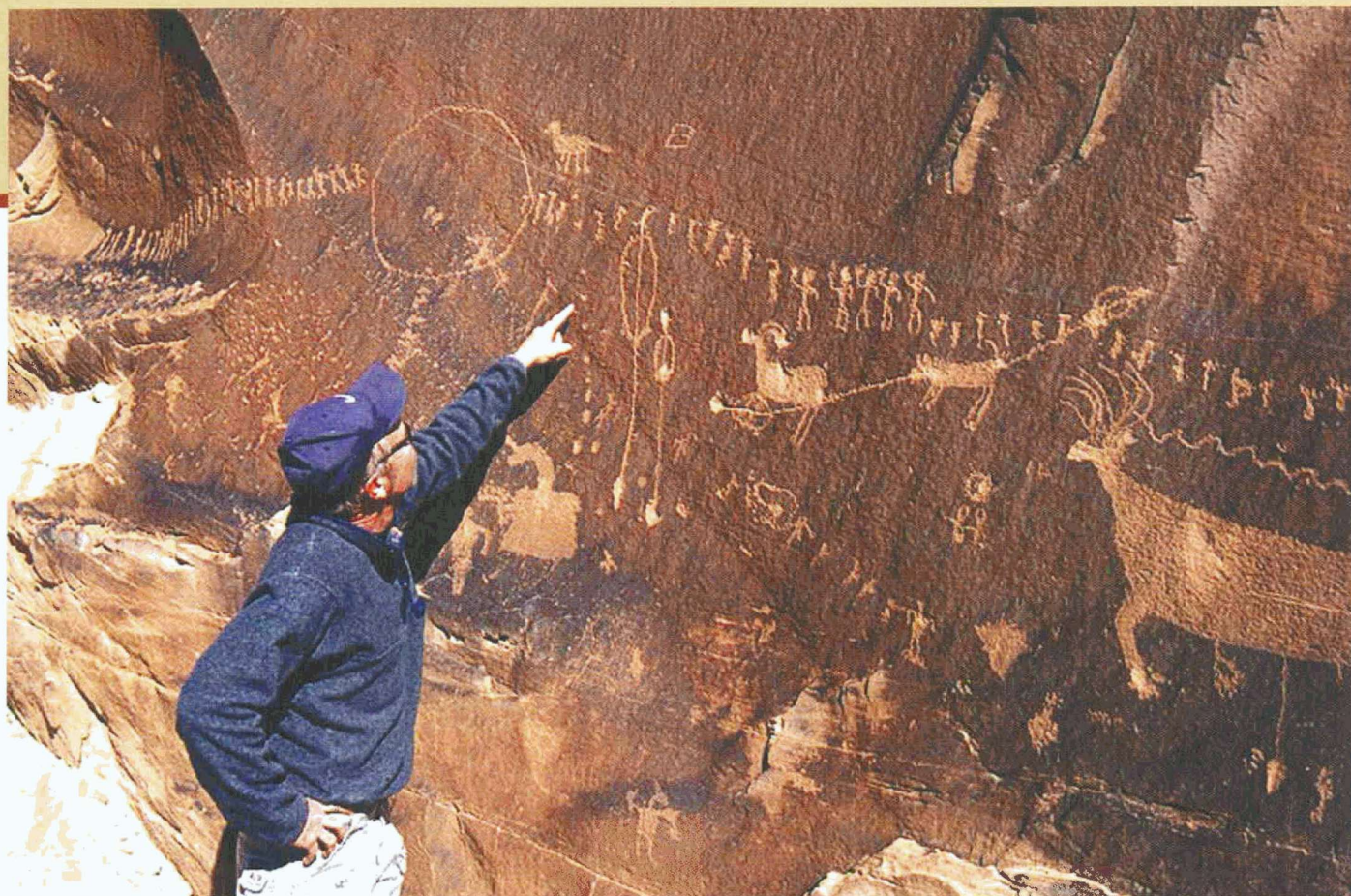
Creating Citizen Stewards

According to former Utah BLM Director Sally Wisely, the approach of the Comb Ridge Project is unprecedented. "Typically, this type of research is done in a very academic environment, but it's clear that the public's involvement and understanding is crucial. Protection of these sites ultimately depends on each visitor acting responsibly."

By sharing this "citizen stewardship" message with everyone who loves to hike, bike, ride, or climb in southeastern Utah, the Comb Ridge Project will allow the public to discover how we learn from archaeological resources and how they should be treated. The survey will involve local teachers, volunteers, Native Americans, and field schools. The BLM will share progress on the project with the public through educational programs, special events, museum exhibits, public lecture series, tours, and much more.

San Juan County Commissioner Bruce Adams said he looks forward to working collaboratively with the BLM to help share the stewardship message. "There needs to be an awareness of how to visit these places so they are not damaged," said Adams. "Our county is very interested in working together so the cultural resources remain in tact."

Wisely noted that local communities will benefit from the proper care of heritage resources on public lands. Heritage tourism on public lands in Utah is



Kelly Rigby

estimated to be directly responsible for at least \$10 million in revenue annually. "By joining together to share how the public can enjoy these areas while minimizing impacts to historic properties, we can ensure these special places will continue to draw visitors for years to come," Wisely explained.

Winston Hurst, an archaeologist from Blanding and co-principal researcher for the project, said the survey will also provide the foundation for future research and protection of the area. "Just as individual dots produce a digital image, each of these sites produces a little bit of information that contributes to a larger picture. We can learn a huge amount of information from surface data alone—if only we can get to it before people have carried it off in their pockets."

You can be part of this exciting project. The BLM is seeking partners and sponsors to help support public outreach efforts, companion events, and the on-going work of the project. To learn how to take part in the Comb Ridge Project or to become a partner, please contact Jim Carter at the BLM Monticello Field Office at (435) 587-1500 or James_Carter@ut.blm.gov. Information will soon be available at www.ut.blm.gov/combridge. *

Adrienne Babbitt works in the Utah State Office of the Bureau of Land Management in public affairs. She has been involved in both the statewide and national planning for the Antiquities Act Centennial in 2006.

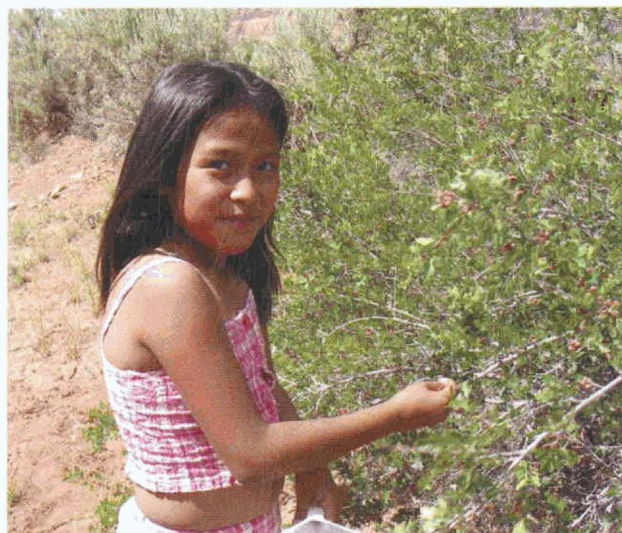


Kelly Rigby

(Top) A visitor looks at the intricate features of the "Procession Panel" in Comb Ridge.

(Center) Comb Ridge is a magnificent 30-mile-long sandstone monocline. Ancient civilizations inhabited this area thousands of years ago.

(Bottom) A Navajo girl gathers wild berries, just as her ancestors and other ancient cultures have done for hundreds of years.

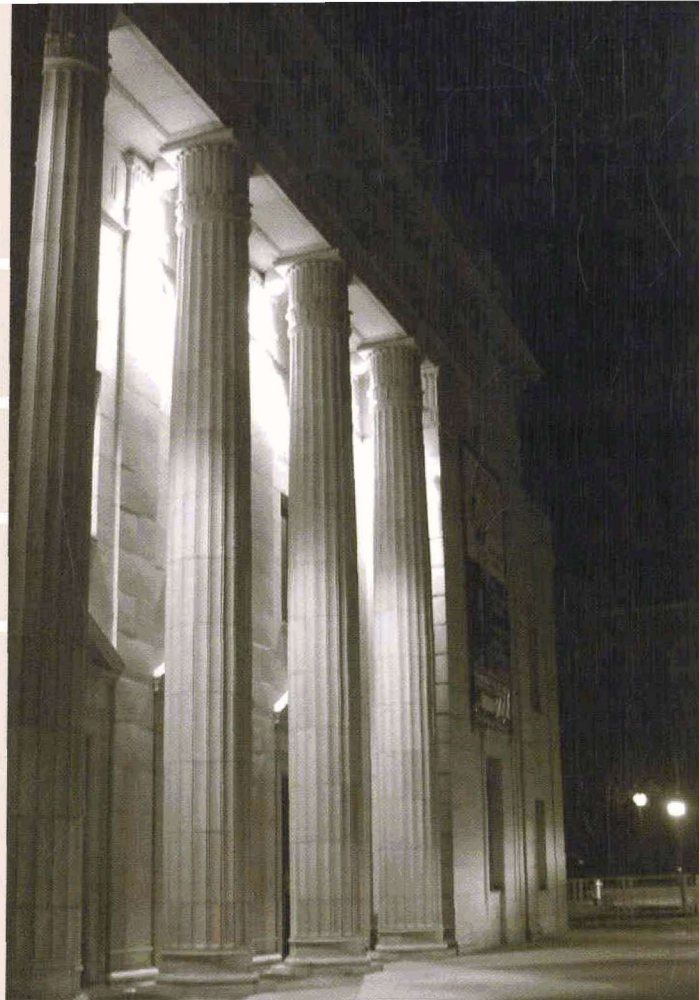
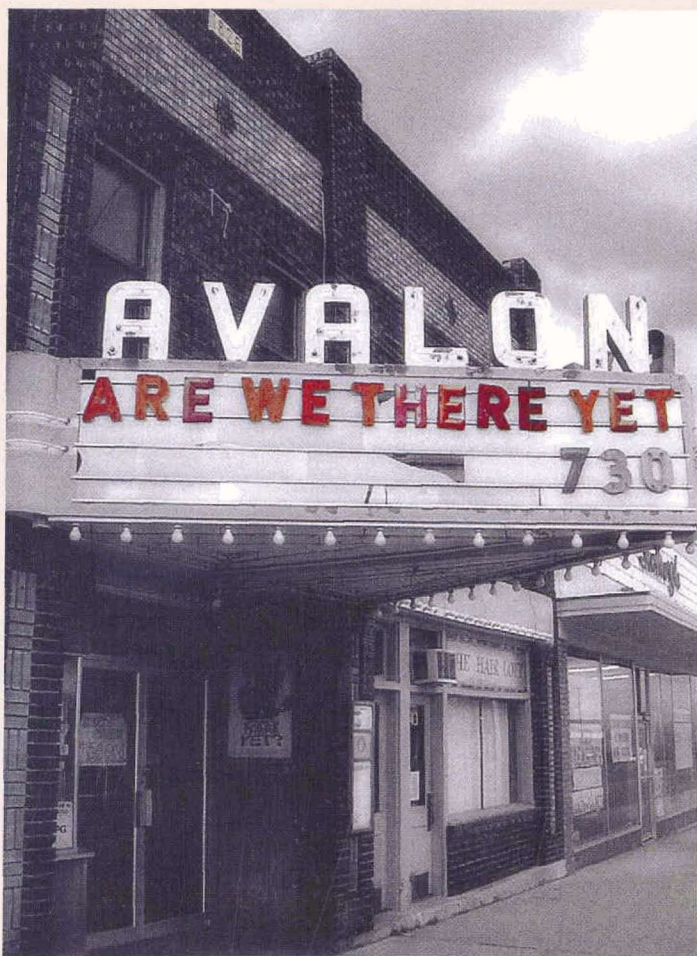


Kelly Rigby

HISTORIC THEATER PHOTO CONTEST

Avalon, Fillmore

Rachel McKinnie, Sandy
Winner



Kingsbury Hall, Salt Lake City

Ronald Pratt, Draper
Winner

Whether large or small, nearly every downtown in Utah had a theater. These buildings served as the entertainment heart of their communities. Since the first organized production held in the bowery on Temple Square in the 1850s, through the vaudeville period, to the beginning of the motion-picture era, to the early drive-in theaters, Utahns have been coming together in theaters to enjoy the latest films and live performances.

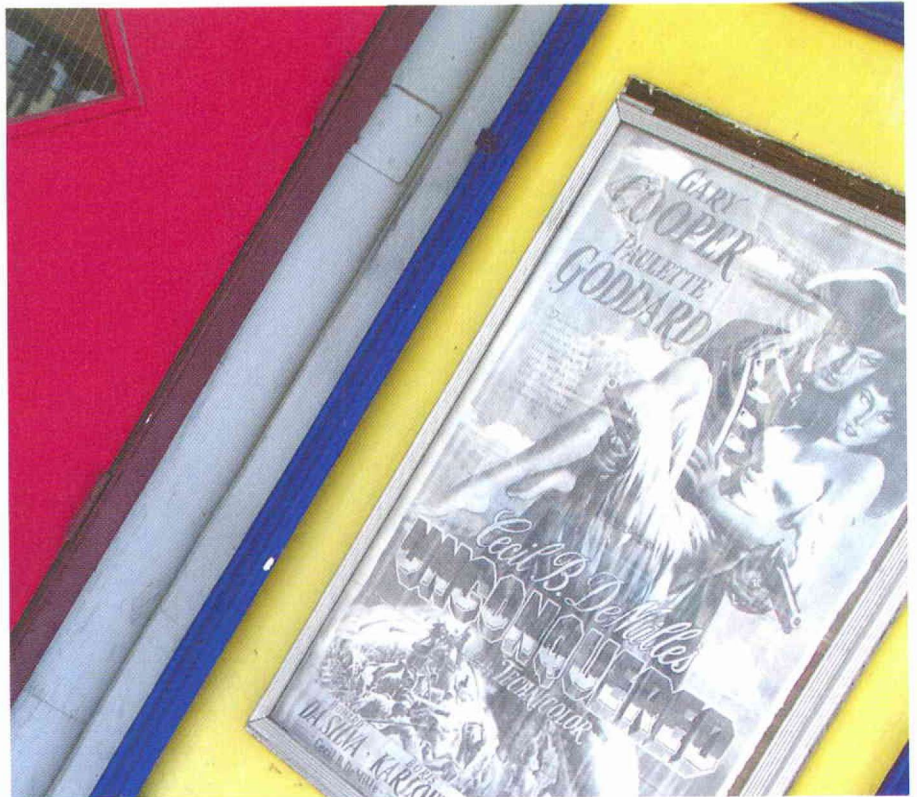
Theaters have a rich history in Utah. Only five years after their arrival in Salt Lake City, Mormon settlers constructed the Social Hall to serve as a theater for the fledgling community. By 1862, the simple adobe Social Hall had been eclipsed by the Salt Lake Theatre which could seat 1,500 people in its elegant interior. During the early twentieth century, elaborately designed movie and performing arts theaters transported audiences to fanciful, faraway places with the Art Deco, Gothic, Egyptian, and Chinese motifs. The luxurious interiors of these theaters made attending a show a magical experience.

With the invention of the “talkies,” older vaudeville theaters lost ground to single screen movie theaters. In turn, single screen theaters have had a difficult time competing with multi-screen theaters. Most drive-in theaters have vanished despite our ongoing fascination with cars. Thus, many theaters that were once cherished staples of their communities have become endangered. Fortunately, in recent years, a number of these buildings have been rehabilitated so new generations will experience their magic.

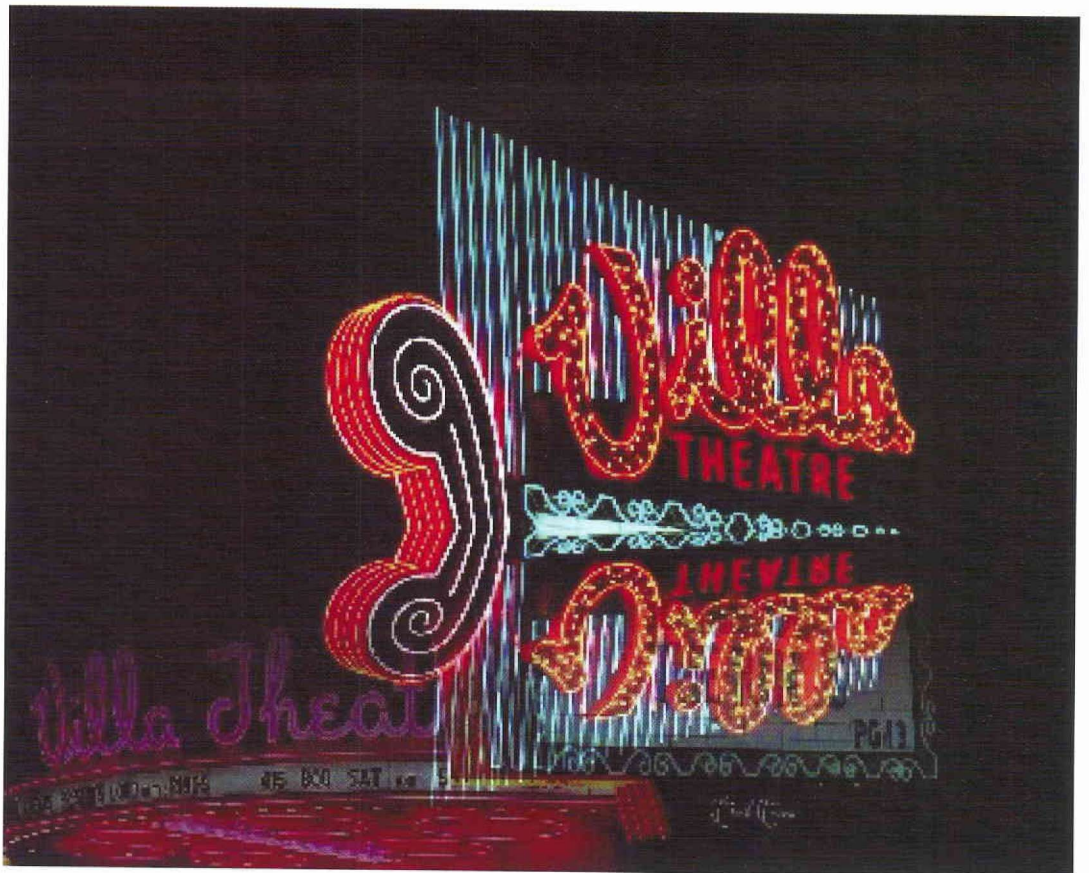
Our photo contest winners and honorable award recipients, selected from more than 100 entries, capture the wonder of some of these remarkable buildings. Winners received custom digital enlargements of photos of their choice from Borge B. Anderson and Associates. *



Circleville Theater, Circleville
 Steve Marshall, Panguitch
 Winner



Avalon Poster in Display Case, Salt Lake City
 Douglas Worthen, Bountiful
 Winner



Villa Theater, Salt Lake City

Rosanne Brueggmann, Salt Lake City
Winner



Peery's Egyptian Theater Interior, Ogden

Jim McClintic, West Valley City
Winner



Sunset Drive-In Theater, Vernal

Griffin Chure, Jensen
Winner



Old Escalante Movie Theater, Escalante

Harriet Priska, Escalante
Honorable Award



Utah Theater Interior, Salt Lake City
 John Ballard, Salt Lake City
 Honorable Award



Film Reel Rewinding Machine, Wayne Theater, Bicknell
 Kathleen Knight, Teasdale
 Honorable Award



Murray Theater, Murray

Joshua Yost, Murray
Honorable Award



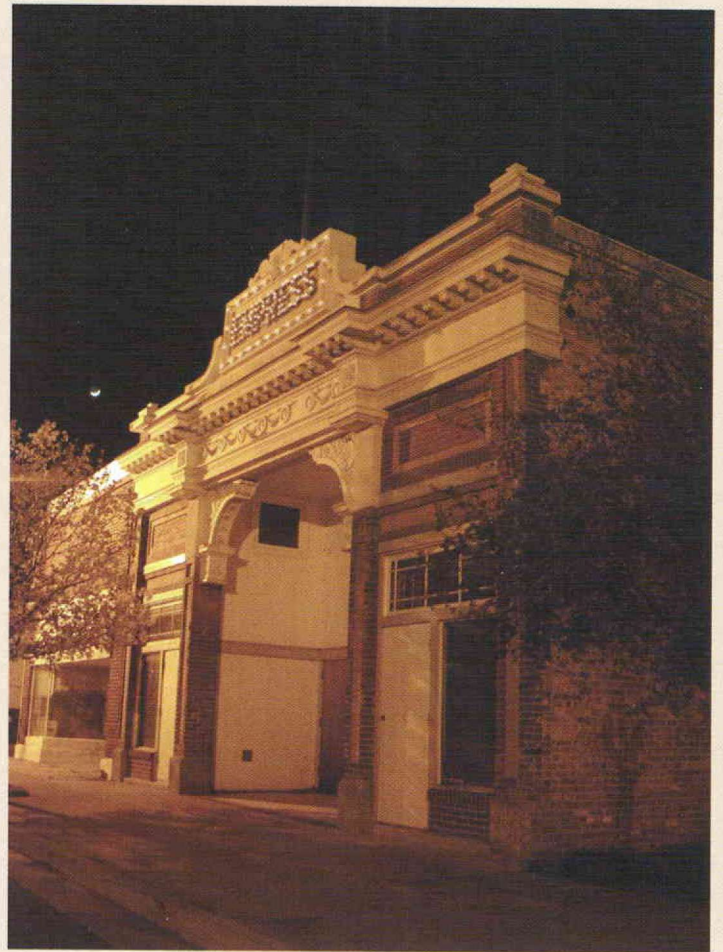
Utah Theater, Logan

John Taylor, Tremonton
Honorable Award



Egyptian Theater, Park City

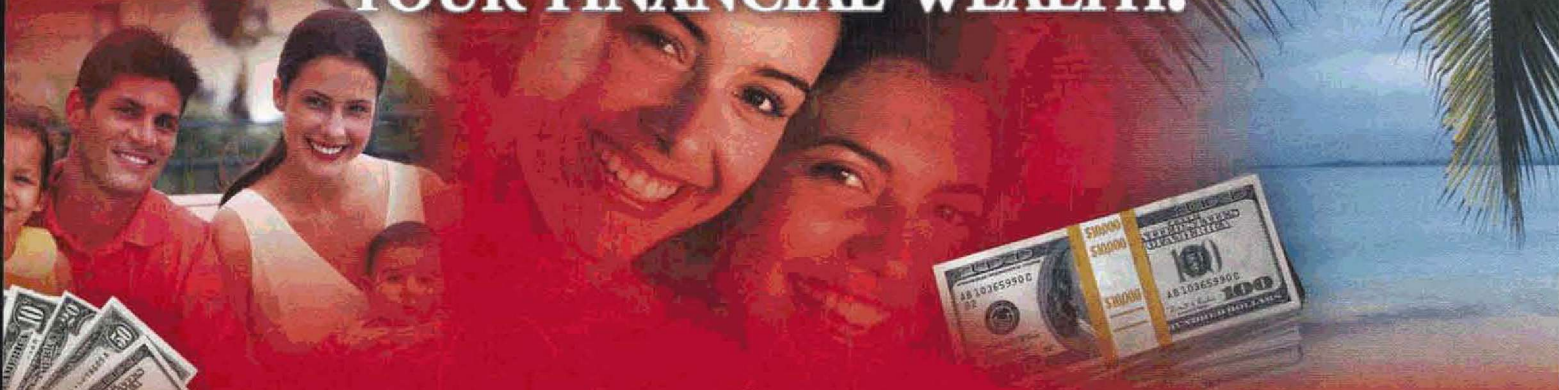
Trish Empey, Salt Lake City
Honorable Award



Empress Theater, Magna

Jim McClintic, West Valley City
Honorable Award

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Choosing the RIGHT Colors for Your Old House: Painting Advice from the Building Doctor

Possibly the most enduring image conjured by the words “historic preservation” is a grand Queen Anne Victorian mansion dressed up in a fresh and skillfully-applied coat of paint. But with so many paint colors and products to choose from, achieving that just-right image with your own old house, whatever the style, can be a daunting task. Get the paint right and you’ll be the envy of the neighborhood. Get it wrong and, well, neighbors can be downright vicious. Here’s my advice for taking on the task of painting your old house with confidence for satisfying results.

Before we talk about the right colors, though, what do we mean when we say “color”? According to traditional color theory, the three basic attributes of color are hue, value, and intensity. Hue is the name of the color on the light spectrum: red, yellow, blue and everything in between. Value is the lightness (tint) or darkness (shade) of the color. Intensity is its purity or strength. So, the hue of that trim color you’re contemplating is blue. Is its value light or dark? Sky blue is a tint, navy blue is a shade. And how intense is the sky blue? Sky blue is always blue in hue and light in value, but it can be vivid, almost pure blue, or it can be neutralized or grayed. With these attributes in mind, let’s move on with some advice.

Look Backward to Move Forward

Go into any store that sells paint and what do you find? A display of paint chips in a staggering array of hues, values, and intensities. Selecting colors that are appropriate for the style of your house, let alone colors you actually like, can seem impossible. However, a number of paint manufacturers have simplified the selection process by offering “historical” paint collections based on the available pigments and popular color trends of the times.

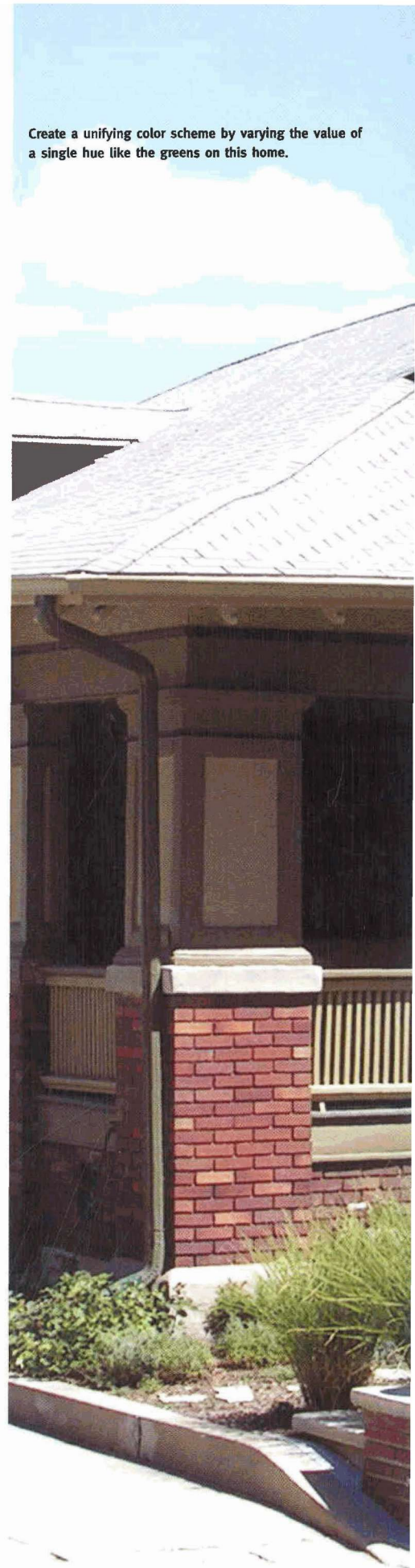
Yes, times were simpler then. In 1900, for example, homeowners could choose from around 100 colors of pre-mixed paint. These early paints were limited because they were based on natural pigments such as ochres, umbers, and oxides. The vast number of synthetic paint pigments available today, coupled with the technology to combine them, makes it possible to create or match any color imaginable. Having such unlimited choices can be paralyzing.

Using a historical paint collection can help you reduce your options to a manageable amount. You’ll still find the full spectrum of hues represented in these collections and some of them, such as the Sherwin-Williams Preservation Palettes, even give tips on how their paint products were promoted and applied for various architectural styles. Of course, you don’t have to limit yourself to these historical colors, but they do provide a good starting point to find colors that you like and that are appropriate to the style of your old house.

Simplicity Brings Harmony

My next piece of advice is to keep your paint scheme simple. A couple of persistent notions intimidate homeowners when choosing paint colors. The first of these notions is that a correct historic paint scheme involves a bunch of bright, rich colors painstakingly applied to the myriad architectural details on a building’s façade. The second notion is that the trim and detail colors of a historic house have to contrast sharply with the main wall color. This notion reached its zenith in popularity in the early 1980s with the ubiquitous dark gray or blue house with glossy, bright white trim.

Create a unifying color scheme by varying the value of a single hue like the greens on this home.





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This homeowner created an attractive color scheme by grouping multiple hues with similar values and intensities.

As the preservation movement in America has matured, more scholarship and science has been applied to the field of historic paints. We've learned, for example, that the "Painted Ladies," those brightly polychromatic Victorian houses in San Francisco, were the exception and not the rule. Generally speaking, building owners during the Victorian era were conservative and that much color and visual activity didn't suit their buttoned-down tastes. We now understand that the late-nineteenth and early-twentieth century trendsetters were generally looking to create harmony and unity on house exteriors. The promotional literature of the day shows recommended color schemes grouped closely by subtle shifts in hue or value.

With a few exceptions, house color schemes were historically limited to three or four colors: a body color, a major trim color, and one, or possibly two, accent colors. The body color is the main color of the exterior siding or wall material. If you have a brick house, the color of the brick is the body color. Trim and accent colors were selected to work with the body color. The bulk of the exterior woodwork and detail were painted in the trim color. Accent colors were used with the trim color to highlight and show off the more subtle architectural details of the house. Large beams on a bungalow porch that catch a lot of light and create shadows are not as critical to contrast with color as some of the smaller moldings or details that don't have a significant architectural presence.

You can achieve a more historically correct and visually appealing appearance by grouping the colors in your paint scheme more closely with less contrast. This can be done in two different ways:

- Within a hue, by reducing the difference between the tints and shades (or lightness or darkness) of a color. For example, rather than stark white, medium brown, and dark brown, use an off-white, tan, and medium brown so the shifts are less pronounced.

- Across multiple hues, by selecting colors with similar value or intensity. Reds and greens can work well with the common buff brick in Utah if their values are similar in "visual weight."

If you introduce visually strong tints or intense hues into your paint scheme, they should be balanced with other major areas of color. The façade should not be broken up by highly contrasting bands of color on horizontal belt-courses or vertical cornerboards, for example, and insignificant details should not become the focal point of the whole composition by jumping out at you.

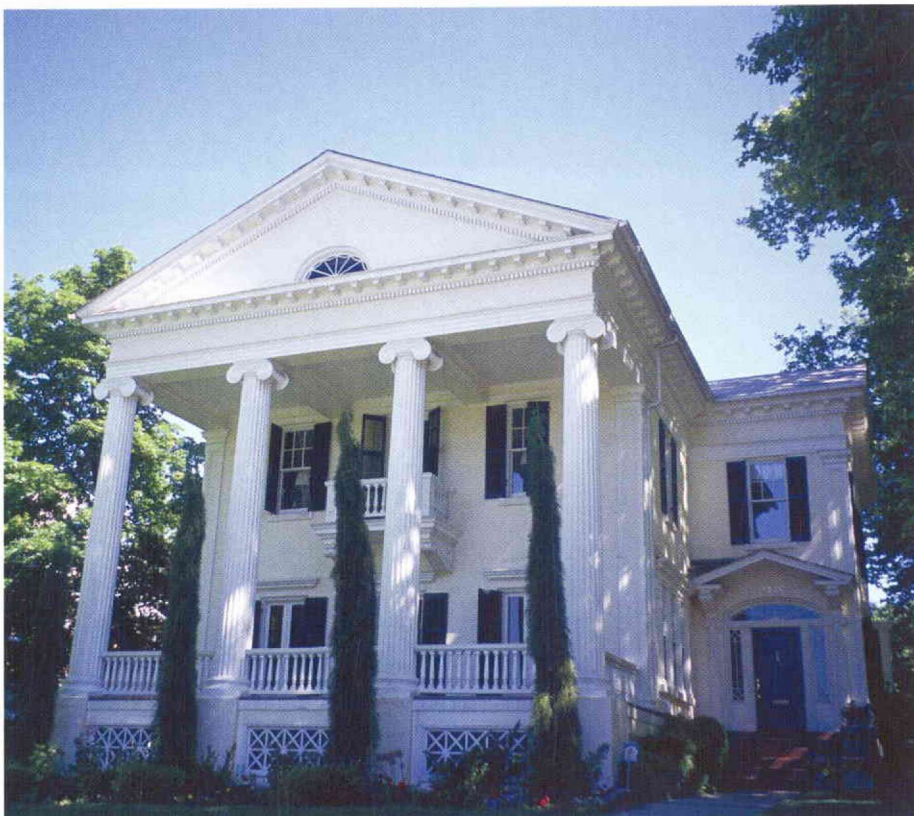
They Had a Choice and So Do You

Different colors and color schemes were popular for each architectural style: rich, saturated colors for Victorian; a palette inspired by nature for Arts & Crafts; light, neutralized hues for Neo-Classical. But for each style, the

full spectrum of hues was available and utilized. Just because the original owner of your house had a penchant for grays and maroons doesn't mean you have to. Here's where the terms "historically accurate" and "historically appropriate" come into play.

"Historical accuracy" is necessary to interpret a property to a period of historic significance. Researching and recreating paint schemes is common practice in the realm of managing landmark historic buildings. For example, because the Utah State Capitol is a public building and is architecturally and historically significant, the original paint and decorating choices should be considered ahead of our own tastes as stewards in the twenty-first century.

"Historically appropriate" paint schemes use color and placement in a manner consistent with the history of your house, but allow for personal taste and expression. Color choices were a matter of taste then and should be for you now as the current owner of an old house. Pick colors you like that are appropriate to the spirit and intent of the prevailing styles when your home was built. Unless there is some compelling reason for historical accuracy, the historically appropriate approach is perfectly acceptable for most home restoration projects.



Select colors that are appropriate for the architectural style of your home. The colors of this home—pale yellow walls, white trim, and dark shutters and door—work well with its high-style Classical Revival architecture.

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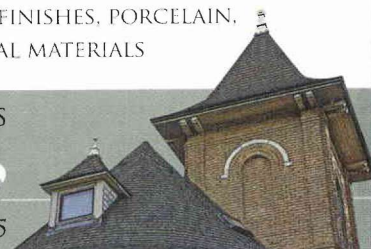
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Warm colors, red and yellows, advance toward the observer while cool colors, blues and greens, recede. Applying the warm yellow accent color to the cool blue trim color makes the yellow ornament appear to jump off the façade.

And the Original Colors Are . . . ?

Opting to research and apply the original colors to your house can be a rewarding challenge. But here again, don't be too obsessed with exactly matching the historic colors. Accurately determining the original paint colors on an historic building is difficult. It requires laboratory analysis to identify the constituents of the paint film and knowledge of regional and local painting practices to know how the materials were prepared and applied. Just exposing an original sample of paint doesn't guarantee accuracy. Early painting mediums were not stable. Linseed oil, the most common binder in historic paints, darkens with age and many of the natural blue and green pigments faded quickly.

Then there is the matter of taste. Occasionally I hear from homeowners who go to the effort to reveal an original paint scheme only to find it uninspiring or, worse yet, colors they detest!

Don't be a Slave to Fashion

Another bit of advice to consider is that trends took time to catch on and move around so there was frequent overlap between architectural styles. Foursquare homes were a popular transitional style between Victorian and the later Arts & Crafts and Period Revival Styles. Foursquares were commonly painted

in either Victorian or Arts & Crafts palettes. Many nineteenth-century homes were repainted in the early twentieth century with Arts & Crafts colors so they would look more up-to-date. If you're not enamored with the paint chips in your "correct" historic collection, it's okay to choose other colors, but the best results will be achieved when you stay true to the spirit and intent of the original tastemakers.

Date Before You Marry

If you are unsure of your ideas, especially when selecting colors from those tiny little paint chips the paint store provides, try them out. Buy small quantities of paint and apply them together in test areas to make sure they're going to work. Yes, a quart of paint costs almost as much as a whole gallon and, yes, it's a bother to keep going back to the paint store to have them mix it "just a shade darker." But testing your ideas up-front with a few quarts of paint is far less troublesome than applying dozens of gallons of the wrong color. Getting your body, trim, and accent colors right before you or your painter begin in earnest can boost your confidence immeasurably and eliminate many of the headaches and nightmares that can plague such a project.

Don't Panic!

My last bit of advice is to have fun. Well, okay, maybe not fun, but at least this part of your old house rehab should be enjoyable. You've completed all the unglamorous tasks, such as replacing sewer pipes and boilers. You've handled the big, messy jobs like tearing off five layers of old roofing and installing those handsome new architectural shingles. It's okay to anguish over colors for a while, but don't get confused or bogged down by too many options. Go ahead, pick a paint scheme that delights you, enhances the architecture of your old house, and shows the neighbors what a genius you really are. *

Don Hartley is an architect with the Utah State Historic Preservation Office and has been advising historic building owners in Utah since 1984.

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The Building Doctor answers some commonly asked painting questions:

Which is better—oil or latex paint?

Latex paint, especially 100 percent acrylic paint for exterior use, is winning the oil vs. latex debate. For many years latex paint was less durable than its oil-based counterpart, but the durability of oil paint was diminished after lead was banned from house paint in the mid-1970s. Since then, the performance of latex has been improved so it is now performing as well as, if not better than, oil-based paint. Latex paint products are much safer for the painter and the environment, too. Unless there is some compelling reason to use oil-based products, I recommend 100 percent acrylic paint for exterior applications. As with any paint product, the key to a long-lasting paint job is the prep work.

My painter wants to "powerwash" the house before she paints. Is that OK?

A mild wash to remove oxidized paint and surface grime is fine, but a powerwash is not. Painters frequently use a powerwasher capable of delivering 3,000 PSI at the wand tip to blow off old paint and clean the surface to reduce their hand-scraping time. Unfortunately, water is not very smart in this application and doesn't recognize the difference between wood and paint. Siding and trim boards can be very badly damaged when the high-pressure water removes old soft wood (raises the grain) along with flaking paint. High-pressure water drives deep into the pores of the wood. Any moisture remaining in the wood when the new paint is applied will cause the film to blister and fail. Plus, high-pressure water can blow in around doors, window sashes, and other trim to damage surfaces and furnishings inside the house. Unless your painter can demonstrate to your satisfaction that powerwashing will not cause the wood to look pitted, scarred, and grainy, tell her to leave the washing equipment on the truck.

Paint is peeling in small areas on my house. Should I strip all the existing paint before I repaint?

No. If the bulk of the paint is still well-bonded to the previous paint film or the wood, there is no reason to remove it all. First look for the causes of failure and correct them. Is water from lawn sprinklers or leaky gutters causing the paint to fail? Is the paint on the outside of a bathroom wall being pushed off the wall by water vapor generated inside the bathroom? After the problem is resolved, scrape, apply primer in the failed areas, and apply the topcoats. Remember, prep work is the key to a quality, long-lasting finish.



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A Modern Landmark in Our Own Backyard / By Kirk Huffaker

On November 10,

2004, dignitaries gathered for a ribbon-cutting ceremony to celebrate the rehabilitation of a landmark building. It was a ceremony like many others that open new or rehabilitated buildings. What made this occasion stand out was the extraordinary historic building being celebrated and the presence of its extraordinary architect, now in his eighties, on hand to witness the opening of the building for the second time.

I greeted Wenceslas A. Sarmiento's arrival in Salt Lake City with the great anticipation one feels when meeting someone whose work helped shape the face of many communities. As the assistant director of the Utah Heritage Foundation, I had worked for quite some time on the preservation of his First Security Bank Building at 405 South Main Street. I knew Sarmiento was involved in ongoing efforts to save buildings he designed in California and was glad his visit to Salt Lake City marked a successful rehabilitation project. In between the hustle and bustle of the opening ceremony, I hoped I could learn more about him, his career, and his design for First Security Bank.

Sarmiento's design was one of several factors that shaped the construction of the First Security Bank Building, including the Great Depression, the rise of modern architecture, new technologies, and the distinctive personalities involved in the project. The building had its birth in George and Marriner Eccles' decision to move the headquarters of the First Security Bank Corporation from Ogden to Salt Lake City in 1950.

It is likely the Eccles hoped their new building would depart from the stereotype of previous monumental, Classical Style bank buildings. Bankers around the country were eager to shed the shadow of the Great Depression and embrace a new image wrapped in modernism. Banks wanted the public to trust them again, to feel secure about their investments, and to have confidence that banks were the future of America. They hoped a new, modern style of bank building would help extinguish the vision of bankers like Mr. Potter hunched over counting his money in *It's a Wonderful Life* from the minds of Americans.

The Eccles shared this vision of a modern, efficient, inviting, convenient, and economical bank building. Bank president George Eccles wanted his desk in the middle of the lobby to provide personal service to customers. What better way for the bank to sell itself and its money?

In the 1950s, the Bank Building and Equipment Corporation was the largest designer of bank buildings in America. It was a major proponent of modern design and could provide all the services a bank would need to get going, except for the assets and employees. It was the perfect company to design the Eccles new building.

Sarmiento was the design architect for the Bank Building and Equipment Corporation when the Eccles approached the company with the First Security Bank project. Sarmiento was born in Peru and emigrated to the U.S. after World War II to take advantage of new opportunities in a growing job market. A student of modern design, Sarmiento worked as a draftsman in the office of Oscar Niemeyer before Niemeyer was appointed chief architect of Brasilia. As the design architect for the Bank Building and Equipment Corporation from 1950 to 1965, Sarmiento created cutting-edge buildings using new technologies and became one of the most prolific architects of the time.

Modern Materials for the Modern World

New technologies discovered during and after World War II enabled architects to experiment with an exciting new palette of materials. During the post-war era these materials were used together for the first time, creating some of the most astonishing and innovative architecture ever. The combination of new technology and Sarmiento's design made the Eccles' vision a reality.

Completed in 1955, the First Security Bank Building utilized cutting-edge technologies. It was only the second building in the country constructed with a true curtain-wall skin composed of panels hung over a steel framework. New York City's Lever House, designed by Gordon Bunshaft for Skidmore, Owings and Merrill in 1952, was the first. Curtain-wall construction is now common place for large buildings all over the world.

The First Security Bank Building also pioneered the use of porcelain enamel steel panels in curtain walls. Porcelain enamel steel was considered a permanent material that could withstand many elements inside and out. The Lustron Corporation started using the panels in 1947 as an exterior sheathing on its prefabricated housing. Sarmiento worked closely with the panels' engineers and production staff at Cupples on the First Security project since both Cupples and the Bank Building Corporation were located in St. Louis. Cupples later produced curtain wall systems for some of the world's most prominent buildings, including Chicago's Sears Tower (1976), the World Trade Center (1977) in New York City, and the World Headquarters Building of the Church of Jesus Christ of Latter-day Saints (c. 1980) in Salt Lake City. Sarmiento went on to use the curtain wall system on other buildings he designed, including the Glendale Federal Savings Bank in Glendale, California and the Newport Balboa Savings Bank in Newport Beach, California.

The First Security Bank Building is by far the best representative of International Style architecture in Utah. Sarmiento's design is a mix of horizontal and vertical rectangular masses pierced by horizontal ribbons of three-part windows and panels. The building's three main colors, gray, white, and sandstone red, create transitional accents to the vertical and horizontal elements. (The red appears to have become a part of Sarmiento's design



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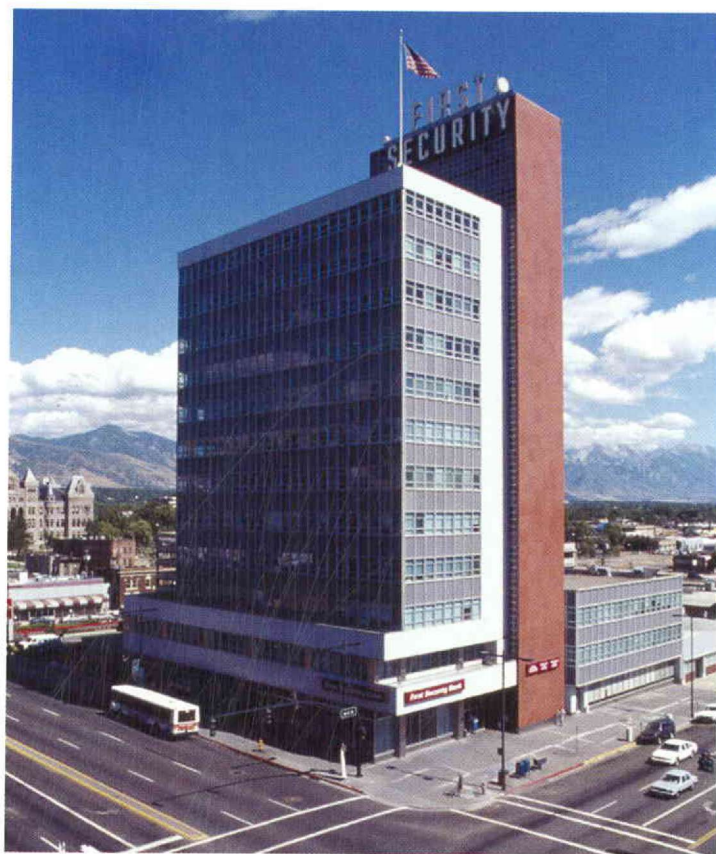
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Kirk Hufaker

The rehab team applied over 80,000 linear feet of new caulk between the First Security Bank Building's porcelain enamel steel panels and then repainted the panels to match their original color.

motif. He used the color on several later buildings.) Like the chrome tailfins on cars of the era, the building's aluminum provides the perfect amount of glimmer.

The Eccles opened the First Security Bank Building with great public fanfare in 1955. A special newspaper insert touted all the building's exciting modern features, including three high-speed Otis Autotronic elevators, electric drinking-water coolers on every floor, dual-zone, high-velocity central air conditioning, and unbroken rows of windows with the latest aluminum frames. Hundreds of people came to admire and tour the building.

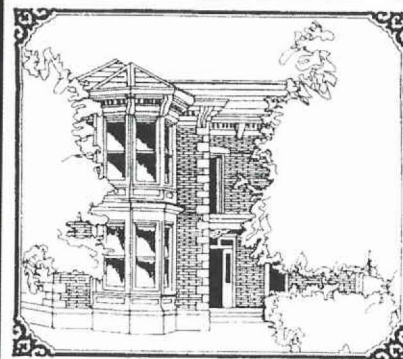
Preserving the "Buildings of Tomorrow"

Over the years, the allure of the First Security Bank Building began to fade in the minds of many Utahns. Today people often perceive the International Style buildings constructed during the post-war era as old and out-dated, but certainly not historic or important. Structures that once represented the "world of tomorrow" are now facing many of the same issues that once threatened Victorian and Craftsman Style buildings: perceived obsolescence, development pressure, deferred maintenance, and widespread lack of public appreciation.

Thus Utah preservationists were worried when the First Security Bank Building went up for sale after First Security Bank merged with Wells Fargo in 2002. The future of the building was in question. For months, newspapers reported Salt Lake County's interest in acquiring the building for the county attorney's offices. These stories ran with renderings of a building completely re-skinned with seamless smoky mirrored glass that would have completely altered First Security's historic character.

After the bidding process, however, Wasatch Property Management won the chance to purchase the site. Preservationists wondered what ownership by this private company meant for the building's future. Utah Heritage Foundation hoped Wasatch Property would be open to learning about the building's history and architecture as well as financial incentives for historic preservation. Not only was Wasatch Property interested, but the company actively sought out this information.

The rehabilitation of the First Security Bank Building was exactly the kind of project preservationists wish for: the project team researched the history, physical components, and character-defining features of the building, developed designs to meet the Secretary of the



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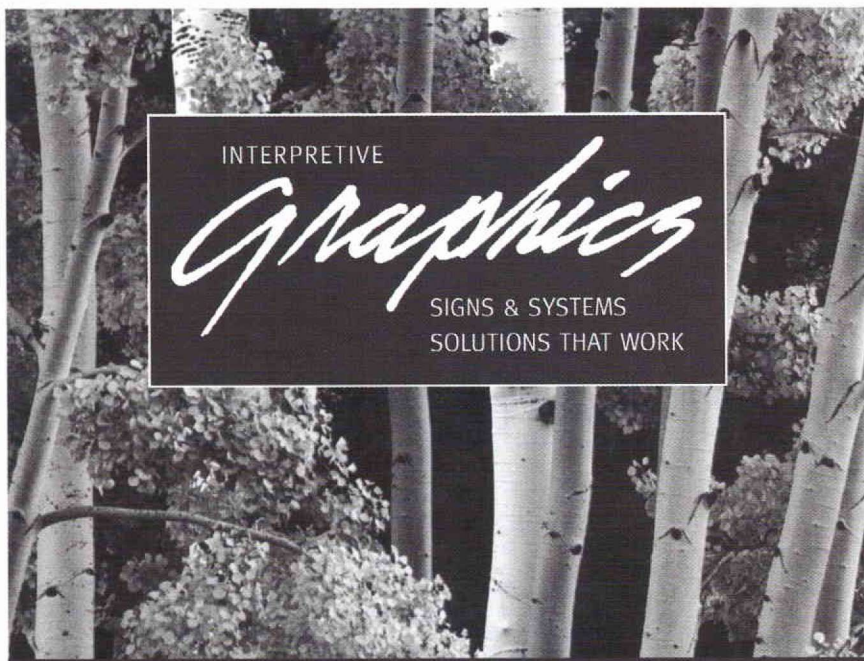
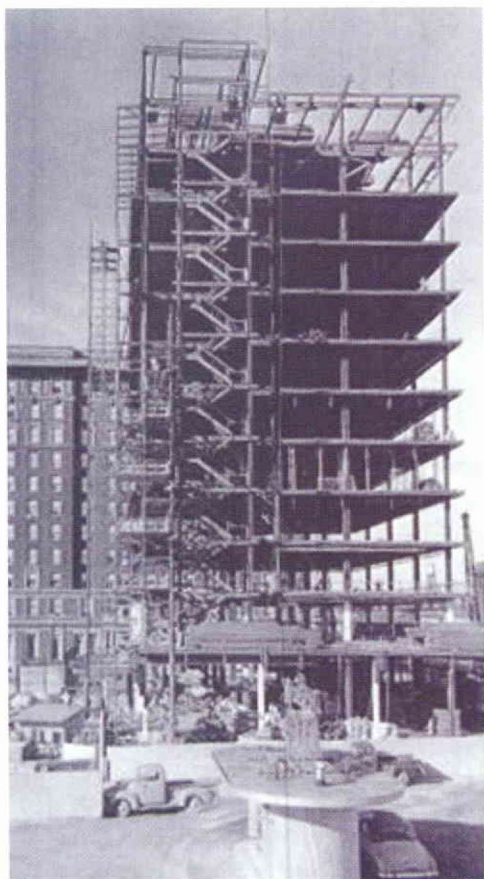
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Interior's Standards for Rehabilitation, and used a combination of preservation financial incentives.

Much of the preservation work focused on the exterior of the building. For example, over 80,000 linear feet of new caulk was applied between the porcelain enamel steel panels, and new windows that match the color and reflectivity of the originals were installed. Architects at the Utah State Historic Preservation Office (SHPO) worked with the project team on several window designs to find one that met Wasatch Property's needs for energy-efficiency and sound-dampening and the requirements in the Secretary's Standards.

Most of the building's historic interior finishes were altered or removed long ago. However, Wasatch Property preserved the remaining historic features of the bank lobby, including terrazzo floors and a wonderful ball-type clock over the elevators. The rehab also included a seismic upgrade and a new telecommunications system.

One of the challenges faced by the project team was preserving the cutting-edge materials Sarmiento employed. As post-war buildings approach their 50th birthdays, preservationists around the country must learn to repair and restore a whole new vocabulary of materials. The procedures for restoring wood,



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(Top Left) The steel skeleton of the First Security Bank Building rose on the Salt Lake City skyline in 1954. ((Bottom) Members of a new generation of the Eccles family, Spencer P. Eccles (left) and Lisa Eccles (right), joined W. A. Sarmiento (center) to celebrate the re-opening of the building their grandfather, George S. Eccles, helped construct 50 years ago.



brick, stone, terra cotta, concrete, and cast iron are well-established. But what do you do with porcelain enamel steel panels?

Although porcelain enamel steel panels were touted as “never needing replacement” in the 1950s, the panels on the First Security Bank Building were definitely looking a bit dingy. It took research, time, discussion, and faith, but Wasatch Property Management reached a successful preservation solution. Wasatch Property first considered completely re-skinning the exterior in a new material and then thought about simply painting all the panels white. However, research conducted by Utah Heritage Foundation established the original steel panels and their red color as significant historic features of Sarmiento’s design.

Wasatch Property and its architect, Peter duPont Emerson of Edwards & Daniels Architects, returned to the drawing board. With the assistance of the Utah SHPO, the project team identified a paint system that will neither ruin the original porcelain finish on the steel panels nor fail quickly. The color of the new paint matches the panel’s original rich, warm sandstone red. This successful solution to a modern preservation challenge gives the building the same crisp, clean appearance it had in 1955.

Wasatch Property completed the \$12 million rehabilitation of the building by Fall 2004. A partnership fund between the National Trust for Historic Preservation and Bank of America which invests in federal and state rehabilitation tax credit projects enabled Wasatch Property Management to tap into investors interested in this kind of project. The First Security rehabilitation generated \$2.3 million in historic rehabilitation tax credits and \$1.23 million in new-markets tax credits.

Discovering A Modern Landmark

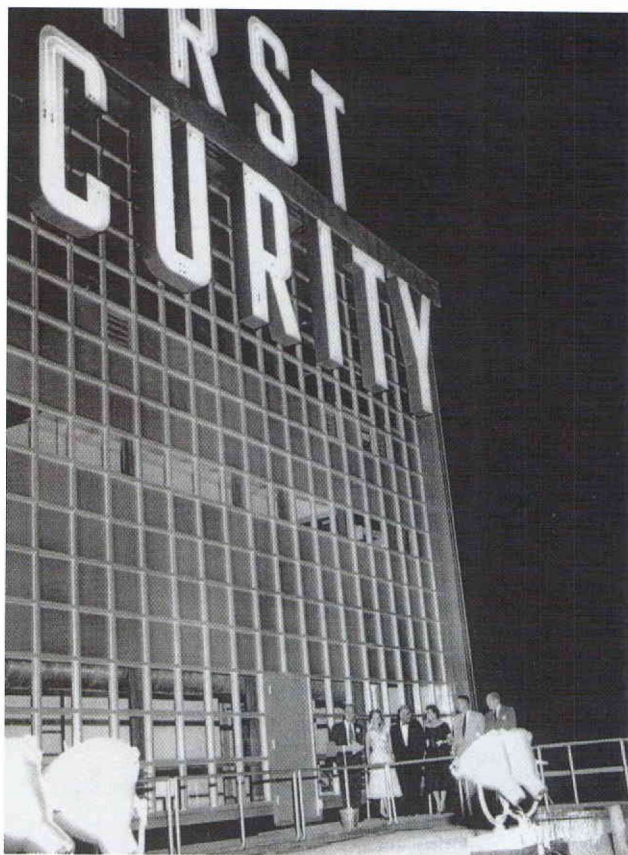
On November 10, 2004, hundreds of people gathered to participate in the reopening of the First Security Bank Building. The celebration included a ribbon-cutting ceremony, public tours, a 1950s cheeseburger lunch, and a Marilyn Monroe look-alike. The owners of Wasatch Property Management happily announced the building’s new tenants and introduced the rehab team. Salt Lake City Mayor Rocky Anderson proclaimed that anybody could see how important the First Security Bank Building is to downtown after this rehabilitation. W. A. Sarmiento spoke about his relationship with the Eccles, the cultural climate that influenced the design, and his thankfulness for the building’s rehabilitation. “It looks like the day it opened in 1955,” he said quietly as he walked across the terrazzo floor he designed over 50 years ago.

In addition to preserving a Utah landmark, the First Security Bank Building rehabilitation opened an exciting new window on architectural history. Local architects and preservationists had long admired the beauty of the building’s clean geometric design and knew of the building’s significance in the history of downtown Salt Lake City. The research conducted during the rehab project, however, established the First Security Bank Building as a ground-breaking work of a major modern architect. The First Security Bank Building deserves its place in architectural history right alongside the Lever House. Sarmiento deserves his place alongside Oscar Niemeyer and Gordon Bunshaft, the architectural masters of the time.

The First Security Bank Building has marked many “firsts” in its lifetime: the first building constructed in downtown Salt Lake City after the Great Depression; the first International Style building in the state; the first use of porcelain enamel steel in a curtain wall; the first curtain wall manufactured by Cupples; and the first International Style landmark to be listed on the National Register of Historic Places in Utah.

The building also gave me my first chance to be a champion. Upon leaving the opening celebration, Sarmiento turned to me and said in his Peruvian accent, “Thank you for being a champion for my building.” You’re welcome, Mr. Sarmiento. Anytime. *

Kirk Huffaker has been an advocate for historic preservation with Utah Heritage Foundation since 1998. He spends his other time enjoying music, outdoor sports, and his brown lab, Cassidy.



Dignitaries gathered on the roof of the First Security Bank Building in 1955 for the first lighting of its sign.



With its original terrazzo floors and ball-type clock, the First Security Bank Building’s lobby still possesses a 1950s “Building of Tomorrow” atmosphere.



(From Left to Right) Crowds gathered to watch W. A. Sarmiento, Paul Willey of Wasatch Property Management, and a member of the Salt Lake Chamber’s Salt Shakers cut the ribbon at the second grand opening of the First Security Bank

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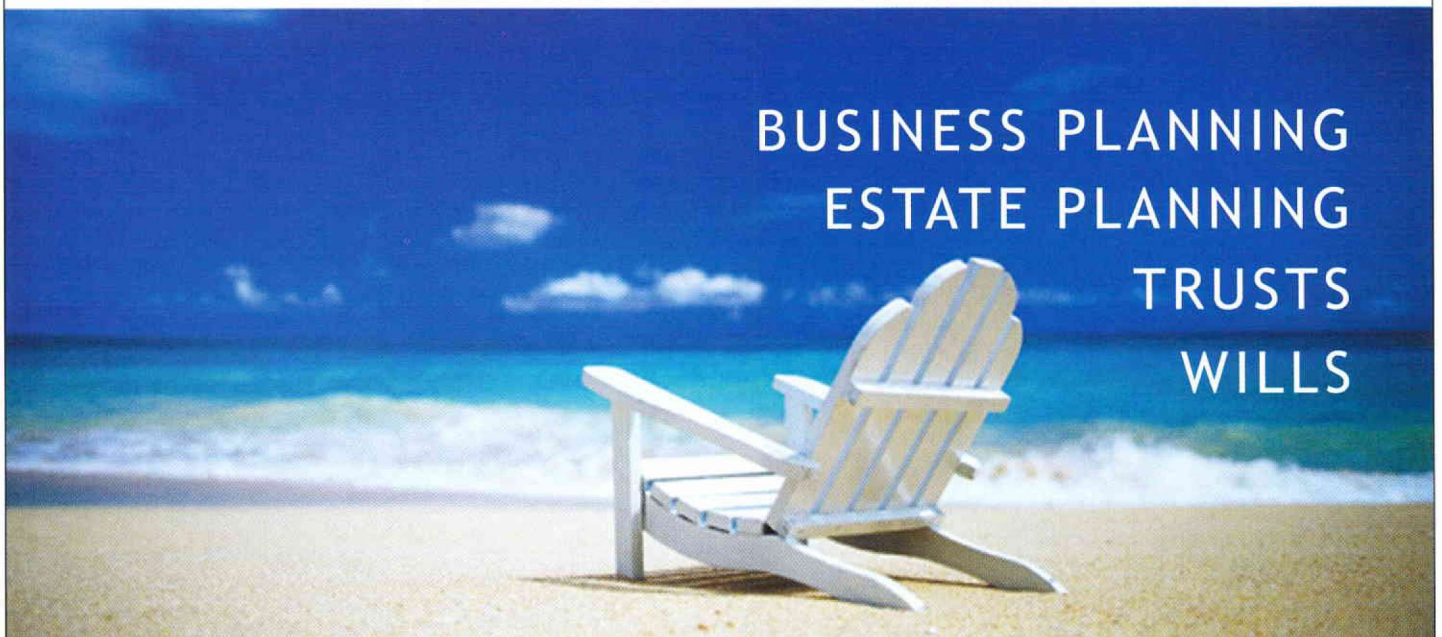
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Modern Solutions to Historic Problems:

The Utah State Capitol Building Seismic Retrofit Project / By Jerod G. Johnson



Capitol Restoration Group

Though it appears solid and immovable, the Utah State Capitol Building's location, materials, and design make the building vulnerable to serious damage during an earthquake.

The day after Christmas in 1912 workmen and dignitaries gathered on Salt Lake City's Arsenal Hill to formally begin excavations for the foundation of Utah's long-awaited Capitol. Work progressed rapidly and concrete columns were visible above grade by May 1913. One year after breaking ground, the four-story concrete frame was complete, with columns for the tall dome reaching skyward during that winter. The final structural work on the dome was completed by July 1914 as workmen covered the body of the building with granite cladding.

Despite the unyielding appearance of its granite exterior, the structure of the Utah State Capitol Building is rife with deficiencies. The original designers and builders of the Capitol probably had no knowledge of the seismic potential of the region. Moreover, designing structures to resist earthquake forces was not even a consideration in the early twentieth century. These issues, coupled with the condition of the building's reinforced concrete, create a serious hazard at the Capitol which cannot be overlooked.

Recent studies indicate earthquakes occur along Utah's Wasatch Front on a regular basis. In fact, seismic monitoring stations typically record in excess of 700 earthquakes in the state each year. Though most of these earthquakes are not perceptible by humans, the balance serve as harsh reminders of the seismicity of the region. Along the Salt Lake City region of the Wasatch Fault, a ground-rupturing earthquake (approximate Richter Magnitude 6.7 or greater) occurs about once every 1,300 years; the last such event is believed to have occurred about 1,300 years ago.

So, what does this mean for the Utah State Capitol Building? Potential catastrophe. The Capitol's proximity to a known fault only exacerbates the risks, increasing the peril for the occupants of the building during an earthquake. Setting aside the life safety concerns, the loss of the building itself would be no small misfortune. The Capitol's designers and builders intended the building to be handed down from one generation to the next as "The People's House," a living legacy of our culture, history, and government. To lose this building to an earthquake would be tragic, especially considering the building's rich historic fabric which cannot be feasibly duplicated.

Hidden Problems

Extensive engineering studies of the Capitol's ability to withstand an earthquake have discovered many deficiencies with the building's structure:

- The structural concrete frame is inadequate for resisting the forces of a moderate to large earthquake. Almost all the building's concrete is inadequately reinforced and varies in strength and condition.
- The masonry backing for the granite cladding is unreinforced and the anchorage of cladding, rooftop parapets, peditments, and balustrades is inadequate or deteriorated.
- The dome could experience severe acceleration and damage due to its height and lack of adequate support. Window penetrations at the base of the dome further weaken it.
- During an earthquake, seismic loads would tend to concentrate at the four large rotunda piers that support the dome. Their foundations could be subject to uplift and/or overturning.

• Because of the stiffness of the rotunda piers, the building would have a tendency to twist about its center rather than move uniformly. This problem is further complicated by the large openings in the third, fourth and roof levels for the large atria.

Based on this analysis, engineers concluded the building has only a fraction of the capacity needed to resist the seismic loads that could be generated from a large seismic event.

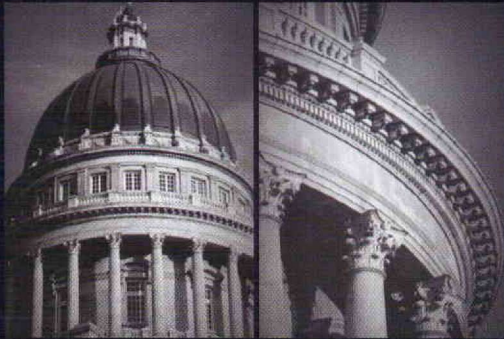
Mitigating hazards to life and property by addressing these structural deficiencies is a major focus of the current Capitol renovation project led by the Utah Capitol Preservation Board. "When the project is finished, the Capitol will be safer than ever before," explains Capitol Preservation Board Executive Director/Capitol Architect David Hart. The project structural engineers, Reaveley Engineers & Associates, in collaboration with the project architects, Capitol Restoration Group, and the general contractor, Jacobsen Hunt Joint Venture, have designed new building systems to reduce the potentially disastrous effects of a large earthquake. "Protecting the Capitol from a

7.3 magnitude quake in many ways is more complicated than any seismic retrofit project to date, including work done on San Francisco's City Hall or the Asian Arts Museum," notes Hart.

Brute Force vs. Base Isolation

Engineers often use a "brute force" approach to strengthen the structure of an existing building by adding a system of new concrete shear walls or steel frames and filling openings. This approach stiffens and strengthens the structure to withstand expected earthquake forces, but has a major drawback. Stiff structures generally tend to experience higher levels of horizontal acceleration (force) than do more flexible structures and must be designed to resist a higher level of force for a given earthquake.

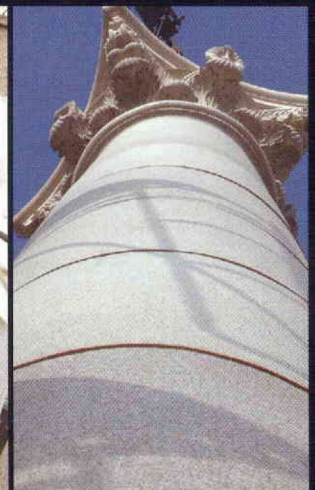
At the Utah State Capitol Building, the "brute force" approach was deemed unacceptable due to the amount of sensitive ornamentation and other features which would likely be damaged in an earthquake.



classic details

modern installation

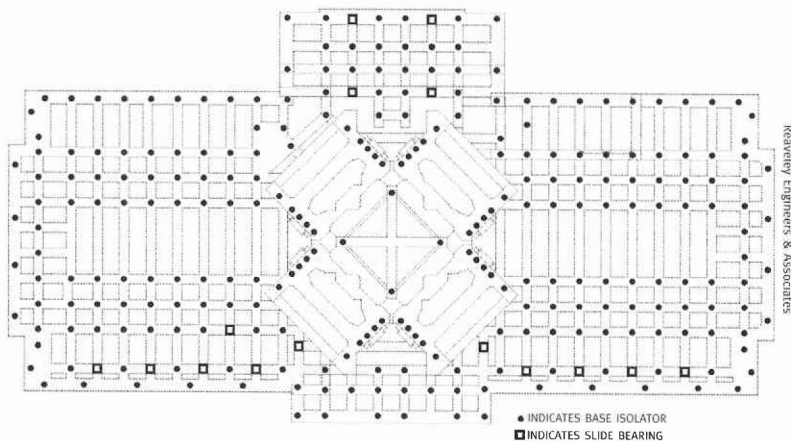
To replace the concrete columns previously surrounding the rotunda drum, KEPCO+ is currently engineering new plant-assembled full-entasis terra cotta columns, complete with the original restored capitals, to be hoisted high on the cupola along with the hand set installation of the new terra cotta veneer.



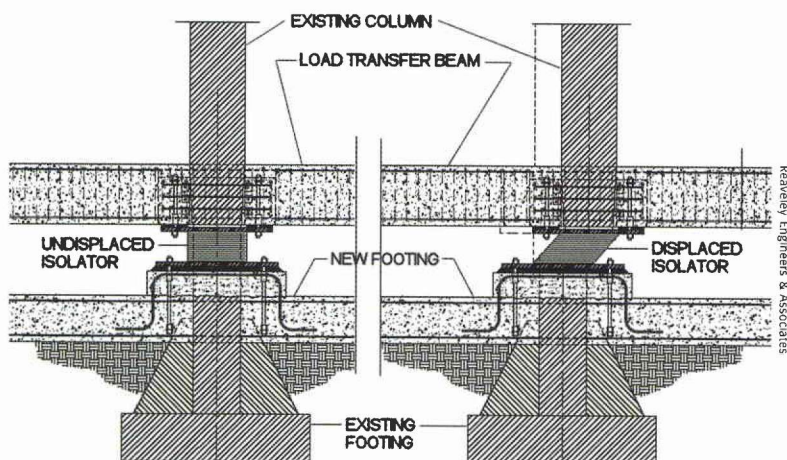
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(Figure 1) Utah State Capitol Isolator Plan.



(Figure 2) Typical Isolator Configuration and Behavior.



Crews excavated tons of soil from around the existing footings for the Capitol's new mat foundation.

Increasing the level of force on these elements only aggravates an already serious concern. To effectively improve life safety, every potential falling hazard at or near paths of egress would require some form of anchoring, a daunting task in this highly-ornamented structure.

As opposed to the “brute force” approach, a base isolation system dramatically reduces the expected seismic forces on a building. Base isolators allow the building to move independently of the ground thereby filtering out much of the horizontal force from an earthquake. This approach reduces the potential stress on sensitive ornamentation and other features and eliminates the need for most of these elements to be anchored.

A Smooth Ride

Because base isolators can more effectively address life safety issues and better protect the building, the Capitol Preservation Board selected a base isolation system for the Capitol. During the renovation, the Capitol will be placed on a network of 280 seismic base isolation bearings at its foundation (Figure 1). A seismic base isolator is a cylindrical device consisting of alternating layers of laminated rubber and steel. The Capitol's isolators are between 36 and 44 inches in diameter, approximately 20 inches high, and weigh 5,000 to 6,000 pounds each. Many of the isolators have a solid cylindrical lead core in the middle to further dissipate seismic energy. The isolators are very stiff vertically, enabling them to support the massive weight of the structure, but relatively limber horizontally, enabling the building to rock gently from side to side as the earth beneath moves (Figure 2).

The effectiveness of base isolation is enhanced when a structure is very stiff above the isolators. This reduces the potential movement within the structure and concentrates the distortion in the isolators. A series of new concrete shear walls will be added to the Capitol to provide stiffness against distortions within the building.

Adding these new walls to the superstructure is a very complex task. Since one of the key project objectives is to maintain the Capitol's historic appearance, the new walls must be strategically located in inconspicuous areas. The original designers of the building incorporated a series of vent shafts directly adjacent to each column at the exterior of each level. New concrete shear walls will be placed in roughly half of these abandoned shafts. Other inconspicuous locations at the interior of the building, such as the abandoned interior vent shafts, rotunda/dome support piers, and the boundaries of new elevator and stair shafts, will also house new concrete shear walls.

The Capitol's isolators will have the capacity to distort 24 inches horizontally in any direction from a neutral resting position. With new concrete stiffening walls added to the superstructure, horizontal movement between adjacent stories is expected to be approximately one-eighth of an inch. Hence, the structure above the isolators will behave as a rigid body while the isolation system experiences the bulk of seismic movement. The result is roughly equivalent

to changing the site from a high seismic zone (i.e., Zone 4) to a moderate to low seismic zone (i.e., Zone 2) or like moving the Capitol from Salt Lake City to St. George where earthquake forces are much smaller. The final expected seismic force on the structure is expected to be less than one-fourth that of force prior to the retrofit.

Installing the isolation bearings at the base of the building is a monumental task that requires the complete removal and replacement of the existing footings and foundations. First, the columns, which bear the loads of the building, are temporarily supported on a system of deep micro-pile foundations. The building loads are carried from the existing columns to the new foundations by a network of concrete load transfer beams. These beams, measuring five feet wide by 30 inches high, are cast around and engage the existing columns. After the temporary transfer of loads is complete, the existing foundations are removed and replaced with a new 24-inch-thick concrete mat foundation. The isolators are installed between the new mat foundation and the transfer beams, de-coupling the building from the mat foundation and enabling the base isolation system to mobilize. The project engineers anticipate the critical de-coupling of the Capitol will take place in October 2006.

Stopping the Toppling

In addition to the base isolation system, scores of other structural and architectural revisions will improve life safety and help protect the Capitol. For example, the 56 massive granite columns that form the distinctive peristyle and porticos on the south, east, and west elevations of the Capitol will be strengthened. These columns measure nearly four feet in diameter and consist of a stack of solid cylindrical segments. Other than mortar and a single one-inch diameter, eight-inch long steel pin, friction is the only mechanism holding these columns together. Analysis indicates the columns will likely buckle during a large earthquake.

To correct this deficiency, the individual segments of these columns will be joined with an epoxy adhesive injected at the joints. The outer six-inch ring of mortar will be removed and replaced with five inches of adhesive. The outer one-inch of replacement mortar will match the original mortar to maintain the columns' historic appearance. Moreover, the columns will be better connected to the granite lintels above them.

High But Not Mighty

Though strengths of the existing structural materials for the Capitol are quite variable, engineers discovered one consistency: the concrete used for the drum and dome increasingly worsens with elevation. At the base of the drum concrete specimens indicate very high concrete compressive strengths. However, near the top of the drum the concrete is of very low, questionable strength. In fact, at some locations concrete specimens could not be cored because they



TV camera crews documented the installation of the Capitol's first base isolator in May 2005.



Members of the renovation team duck beneath the edge of the Capitol. The building is temporarily supported by pile caps wrapped in blue insulation.

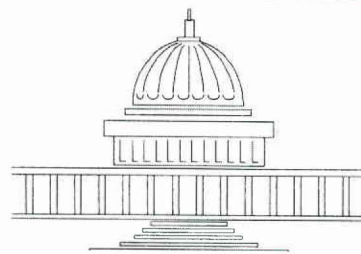


Massive new concrete load transfer beam cast around the Capitol's columns will rest on the base isolators and support the loads of the buildings.

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The renovation team installed a titanium mesh anode on the inner surface of dome as part of a cathodic protection system to prevent the further corrosion of the dome's structural steel.

fell apart. The weak concrete at this area could be the result of too much water and not enough cement in the original concrete, improper handling of the mixed concrete, or bad weather conditions at the time of placement.

The problem of weak concrete at this region is exacerbated by several other factors that increase the seismic risk to the dome and drum. The drum is laced by a series of windows at two different elevations that create two extra-weak locations in the drum structure. Seismic stress would concentrate at these regions resulting in more distortion. In addition, seismic loads are typically proportional to building height. This means the seismic demand at the dome and drum is increased simply because it projects high above the main building structure.

As a remedy to the weak concrete, window penetrations, and seismic amplification due to elevation, a new six-inch reinforced shot-crete wall has been added to the interior of the upper dome/drum surface. The existing concrete was prepared to adhere to the new wall and then the reinforced shot-crete layer was applied directly over it. The new shot-crete will:

- Strengthen and stiffen the dome/drum structure,
- Confine the existing weak concrete and prevent it from becoming projectile,
- Act as a substrate for anchoring new and existing cladding elements, and
- Protect the existing concrete and steel from deterioration and corrosion.

A Current Runs Through It

Historic correspondence indicates the Capitol dome has experienced water infiltration problems since shortly after it was completed. The long-term consequences have proven severe: concrete, steel reinforcement, and structural steel have severely corroded and deteriorated. Because much of the structural steel is encapsulated by concrete, repairing the corrosion or completely replacing the corroded members would be very difficult and exceptionally costly.

Studies determined an active cathodic protection system would be the most viable alternative for lengthening the life of the dome structure. (Simple cathodic systems protect

residential water heater tanks from corrosion.) A system of electrical anodes is being installed throughout the dome structure. These anodes will induce a very small artificial current into the structural steel and concrete reinforcement, altering the electrolytic cycle and arresting the corrosion process. This innovative system has been designed to halt the corrosive process in the dome for at least 50 to 100 years.

When the Utah State Capitol Building re-opens in 2008, it will be a much safer place to work and visit. The seismic retrofit will also help insure the restored Capitol serves future generations as a symbol of Utah's culture, heritage, and government. The Capitol will be recognized as an outstanding feat of architectural and engineering design, not only for the current work being performed, but also for the impressive original building bequeathed to Utah's citizens from an earlier generation. *

Jerod G. Johnson is a structural engineer with Reaveley Engineers & Associates and an associate professor in the Department of Civil and Environmental Engineering at the University of Utah. Jerod has worked as the project engineer for the Utah State Capitol Building base isolation and restoration for five years.

TBSI

Teaches Skills from the Past Needed for the Future

BY LUCY BURNINGHAM

On a sunny, crisp April morning, John Lambert crouches next to one of Sanpete County's historic homes from the late 1800s, leaning close to get a better look at the mortar. Lambert touches a spot that crumbles with decay and looks satisfied. He's found the perfect place for his new students to begin work.

Lambert is inspecting the structure in preparation for the three-day Historic Masonry Restoration workshop he's about to teach at the Traditional Building Skills Institute (TBSI) at Snow College in Ephraim. Like his fellow TBSI instructors, renowned professionals and artisans specializing in a range of traditional building skills, Lambert relishes the chance to convey his passion for the past as it relates to today's restoration projects.

"We cannot properly preserve our historic structures until we're able to get in the minds, hearts, and eyes of the craftsmen of the time and see things from their perspective," he says. "Not until we have that perspective can we go about a respectful restoration job."

This sentiment is at the heart of the work at TBSI. But instead of explaining this philosophy from the front of a classroom, instructors base their workshops on hands-on experiences both on site and off site. Lambert, who teaches masonry skills for various organizations around the country, explains that TBSI stands out for its applied approach. "A lot of preservation restoration is more theoretical and based on book learning or PowerPoint presentations," Lambert explains. "In most TBSI classes, people's hands are in the mud, tearing out logs, or honing down stones."

A TBSI student creates an ornamental plaster medallion using wet plaster and a traditional wood mold.

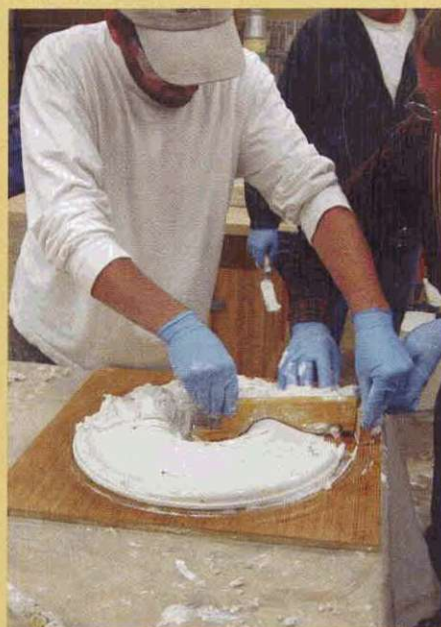
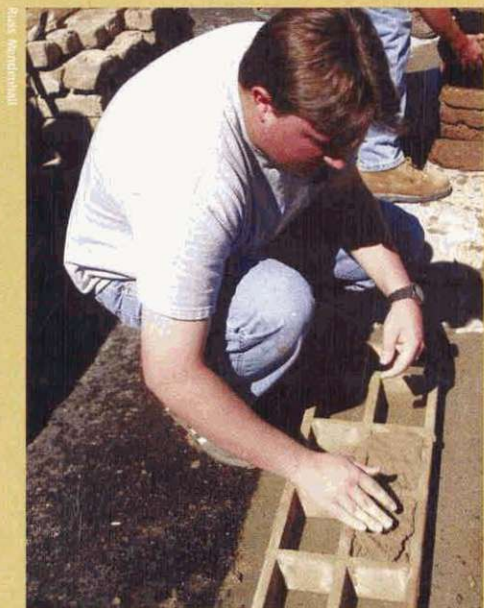


Photo: Mary Ann Smith



As part of an Adobe Restoration workshop, Snow College student Andrew Butler learns how to press wet adobe into a brick form.



Students replace a rotted sill log on an historic Sanpete County cabin during a Log Cabin Restoration workshop.



Masonry instructor John Lambert demonstrates how to mix mortar of the proper consistency.

Preserving a Tradition of Craftsmanship

After a fire swept through the historic Utah Governor's Mansion in 1993, Wilson Martin of the Utah State Historic Preservation Office realized the state lacked workers skilled in the traditional crafts required for the building's renovation, says TBSI director Russ Mendenhall. In response, the Utah Division of State History, the University of Utah Graduate School of Architecture, and Snow College collaborated to create TBSI. "We're the only institute like this west of the Mississippi," says Mendenhall. "There are a lot of schools like this in the East, but their buildings are 200 years older than ours. People need to learn the correct processes for our structures."

Since its inception in 1996, TBSI has offered an evolving rotation of courses based on instructor availability and student interest. Today, students can choose from 15 three-day workshops between September and April, Snow College's academic year.

With enrollment between eight and 20 students for each course, attendees come from all backgrounds. TBSI's brochure extends an invitation to novices, professionals, and anyone in-between saying its workshops are designed for "homeowners, hobbyists, builders, contractors, architects, preservationists, and students." Many of the students come from Snow College's two-year construction management program, which offers an emphasis in historic preservation.

Due in part to the success of TBSI, the State of Utah Board of Regents unanimously approved a two-year Associate of Applied Science Degree in Traditional Building Skills in August 2005. Board members are excited about the opportunities this degree brings to Snow College and the state of Utah. An enthusiastic Mendenhall explains, "This unique degree is the greatest achievement I have been

involved in during my 30-year tenure at Snow College. It combines classroom theory on historic preservation with the grass-root skills use to create the actual historic sites that TBSI workshop participants renovate." The new degree should increase TBSI's enrollment and allow it to offer more workshops.

Speaking Craftsman to Craftsman

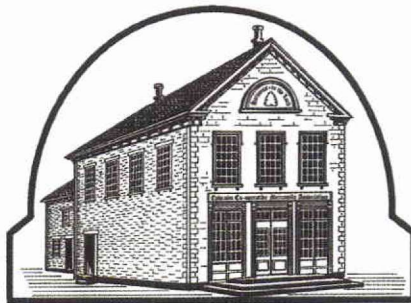
Lambert, a mortar specialist with two decades of professional experience as the founder and president of Salt Lake City-based Abstract Masonry Restoration Inc., reports that students from all over the country have traveled to Utah to attend his Historic Masonry Restoration workshop. "We get a lot of building owners who attend so they can know if they are getting a clean shake from their contractor," he laughs. "The skills to understand what we do are not widely available and are very technical and specific."

When asked about his most satisfying experience at TBSI, Lambert recalls the owner of a masonry repointing business in Washington, D.C. who provided him the chance to debate and defend his own approach to masonry restoration. Like many workshop attendees, this student was accustomed to using hard, impermeable modern-day mortar. Historic materials, however, were softer, more flexible, and breathable. Although many people believe the modern materials are better for masonry repairs, softer materials are actually preferable because they do not damage historic masonry the way modern materials can.

In just three days, Lambert prompted his student to reevaluate his approach. "It was great to see an up-and-coming craftsman with the dedication to fly across the country and discover a new perspective on his work." The student's presence at the workshop ultimately resulted in the accomplishment of one of TBSI's broader goals—to create a forum for experienced and novice craftsmen to discuss their work, which will ultimately result in better historic preservation.

Real Work on Real Projects

Students learn about the practical application of traditional building skills by putting them to use on actual restoration projects. The TBSI program offers the unique opportunity to work on historic sites as early as the first day of class. For example, the cabin owned by pioneer artist C. C. A. Christensen needed a large-scale restoration after it was moved to Heritage Square in Ephraim, so TBSI focused several Log and Timber Restoration workshops around the project. Students built



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Expert instructor Chris Gochmour demonstrates dovetailing with a backsaw during a Wood Furniture workshop.

a new door, water-sealed the structure, and practiced chinking, daubing, and roofing.

In Spring City, TBSI workshop participants helped in the ongoing restoration of the town's beloved 1899 Victorian schoolhouse by cleaning, repointing, and tucking masonry and stone. Other workshop projects have included work on the Moroni Opera House as well as the American Legion Hall and the Patton House in Manti. As part of a new Adobe Restoration workshop, TBSI students visited northeastern New Mexico to work on historic structures in the Mills Canyon Orchard. This former fruit and vegetable farm from the late 1800s includes dilapidated stone and adobe buildings in need of careful restoration.

One restoration project takes students even farther away from Snow College. TBSI offers a workshop in Great Britain where students work on a 600-year-old castle in Wales. John Lambert heads the excursion that includes students who have already learned some basic skills in his Historic Masonry Restoration workshop. When they arrive, the students perform painstaking work on what may have been the home of the last Prince of Wales, removing cement mortar and replacing it with a lime-putty version that more closely matches the composition of the original mortar.



Using reproduced lime-putty and original rocks, students repair a twelfth-century wall during TBSI's study abroad program in Wales.

Russ Mendenhall

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The TBSI students stay with a host family to cut down the trip's cost and provide a wonderful cross-cultural experience. "The benefit is you get the consummate blend of an architectural preservation experience through hands-on work on a twelfth-century building," Lambert says, "and you get the cultural and social experience of staying with a Welsh family."

Seeing the Big Picture

In addition, students begin to understand preservation on a new level, Lambert explains. "They get a much broader perspective of historic masonry preservation in a worldwide context, instead of just from 1847 to now, which is what you find in Utah." He points out that many of Utah's early settlers came from Great Britain, which helps the students make a historical connection to local projects.

Richard Stephenson, who received his bachelor's degree in manufacturing and engineering from Brigham Young University this year, has taken numerous courses at TBSI, including woodcarving, traditional blacksmithing, stone cutting, and masonry restoration. He was drawn to TBSI by his interest in woodworking which he inherited from

his father, a beekeeper with an extensive woodshop.

Stephenson's trip to England introduced him to new approaches to preservation. "The mentality [in England] is different than what we have here," Stephenson says. "Here we want things crisp and clean, but there, they'll put a new stone in next to a soot-blackened one knowing that in 100 years it will match."

Stephenson says TBSI workshops have helped him look at structures with a more European view of time as things that will last beyond his own existence. "Now I have a greater appreciation for historic buildings and craftsmanship," he explains. "I take greater care in the work I do, and I try to make things that will last 100 to 200 years into the future."

If other TBSI students learn the lessons Stephenson has taken to heart, then TBSI will have accomplished its goal: to train the craftspeople with the skills, knowledge, and passion to restore and preserve historic buildings in Utah and beyond.*

Lucy Burningham is a freelance journalist based in Portland, Oregon, who has a keen interest in the West. She has worked as an editor for a city regional and a shelter magazine and holds a bachelor's degree in English from the University of Montana in Missoula.

TBSI's three-day workshops run between September and April and cost \$325 for first-time no-credit participants, and \$300 for returning no-credit participants. The course fee includes all materials, the use of TBSI tools, and lunches. For a complete schedule and more information, call 435-283-7575 or visit www.snow.edu/tbsi.

TBSI courses include:

Stained Glass Restoration
Instructor: William Littig

Historic Masonry Restoration
Instructor: John Lambert

Wood Furniture Making I
Instructor: Dale Peel

Wood Furniture Making II
Instructor: Chris Gochnour

Traditional Faux Painting
Instructor: Regina Garner

Millwork/Woodwork
Instructor: Michael Jackson

Wood Windows
Instructor: Philip Kearns

Adobe Restoration
Instructor: David Yubeta

Blacksmithing
Instructor: Dan Wardle

Decorative and Flat Plaster
Instructor: TBA

Log Cabin Restoration
Instructor: Joseph Gallagher

Stone Carving and Restoration
Instructor: Keith MacKay

Timber Framing
Instructor: Joey Paulsen

Woodcarving
Instructor: Mathew Phillipson

Ceramic Tile Painting
Instructor: Regina Garner

Historic Masonry Study
and Tour in England
Instructor: John Lambert

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Angel Doors and Polygamy Pits

UTAH'S ARCHITECTURAL FOLKLORE

When it came to building a home, most of Utah's early Mormon settlers tried to recreate the types of homes they had left behind. Thus Utah's early architecture tends to resemble the architecture of the rest of the nation during the last half of the nineteenth century. There are exceptions, to be sure. The Greek Revival Style remained popular here after it had become passe in the rest of the country, probably due to Utah's isolation through the 1860s. Adobe homes were common at first, but Utah builders returned to more familiar materials when they became available. Here and there you can find a hint of Scandinavia or another homeland left behind.

More distinctive than the style of Utah's early buildings, perhaps, are the stories we tell about these buildings. You certainly won't find tales of "angel doors" and "polygamy pits" in other regions of the country. Most of these stories arise from oral traditions and were passed informally from one generation to the next. Today, we often accept them as truth, in part, because they are so much fun to believe. But how well do these stories reflect the original uses of the features they describe? Let's investigate.

Two Doors, Two Wives?

The house with two front doors is one of the most identifiable forms of Utah's early residential architecture and can be found in many communities throughout the state. Known as a double-cell house, it is distinguished by a floor plan with two equal-sized rooms across the front. Each room has an exterior entryway, and the rooms are typically connected by an interior doorway.

According to Utah folklore, the double-cell house type was developed by early Mormon practitioners of polygamy. This premise seems to make sense since a double-cell house is basically arranged like a duplex. It could provide a separate living space for two families, yet allow occupants to circulate between households through the interior door.

How does this story hold up to historical scrutiny? Though the double-cell house appears to be an obvious local design adaptation for functionality, it was actually developed in the Mid-Atlantic and Southeastern United States. Early Mormons who moved to Utah continued building double-cell houses because they were familiar with them and they were convenient.

BY CORY JENSEN

So why have two front doors in the first place? Convenience has already been mentioned. Another reason was to provide a symmetrical appearance to the primary facade. Following the Revolutionary War, classical ideology pervaded almost every corner of American thought. One of the primary tenets of classicism is balance and order in everything, including architectural appearance. Because the double-cell house has an interior wall dividing the two primary rooms down the center of the building, the exterior openings had to be placed on either side in order to maintain a balanced appearance: a door and a window on one half of the facade and a door and a window on the other half.

We know the double-cell house did not evolve here in Utah as a means of housing multiple families in a polygamous household. Title and census records reveal that many of the original owners of double-cell houses were not polygamists. However, that does not mean polygamists did not use this house type. Polygamous families found double-cell houses well-suited for housing multiple families. These houses allowed separate families to live in a single, functional building rather than in separate houses, which would have been more expensive. Of course this was not the only type of house polygamous families used, but it was probably the most practical.

The next time you see an early Utah house with two front doors you will know the truth: these houses were not designed by polygamists, but polygamists did use them.

Cold Storage or Hideout?

The practice of polygamy has inspired another piece of Utah architectural folklore. One persistent story holds that polygamists dug pits in their basements or cellars as hiding places. According to folklore, a "polygamy pit" was a hole in a dirt floor covered by a wooden door. If federal marshals came searching for a polygamous husband, he could hide in the pit until the searchers left.

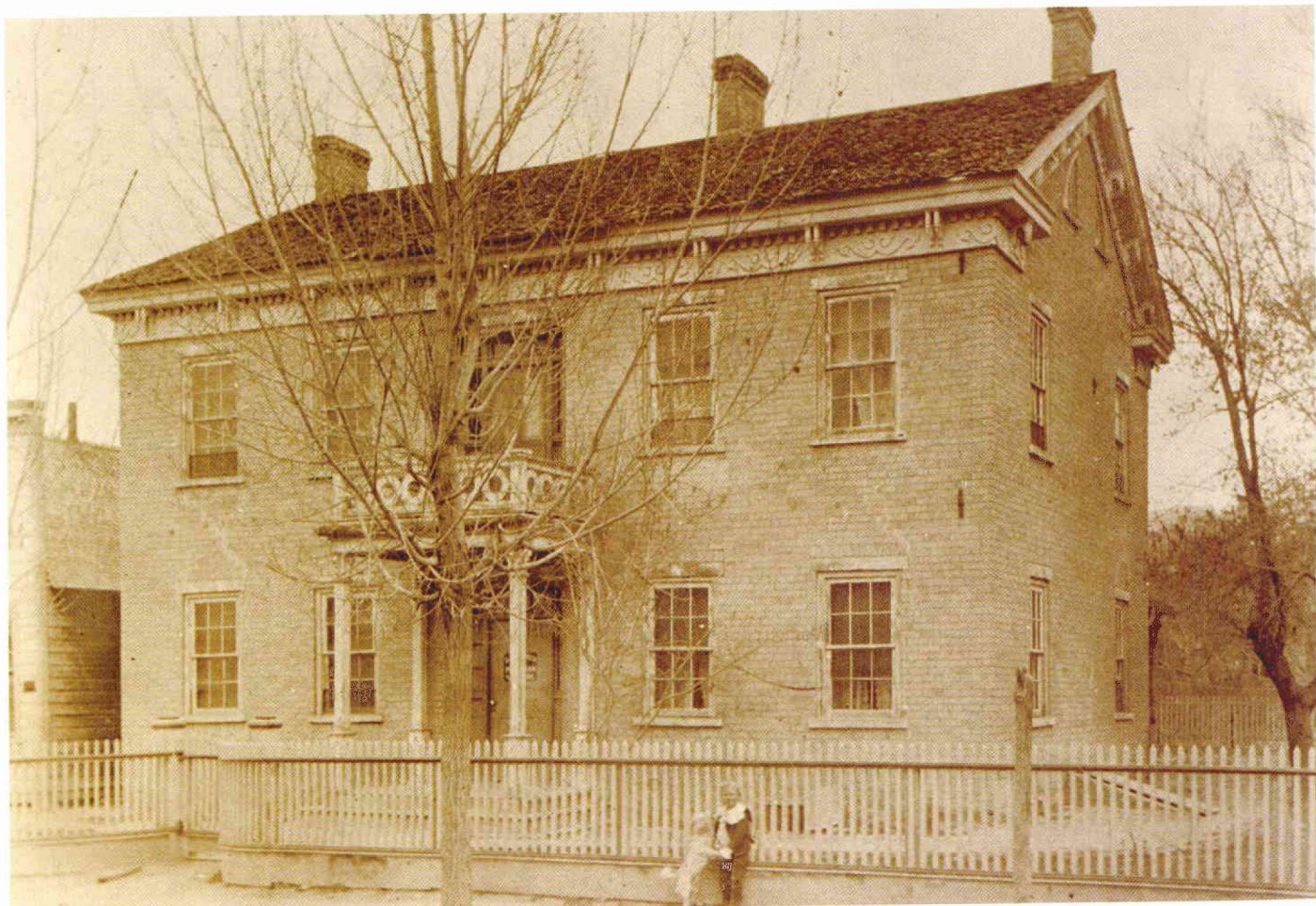
The idea of polygamy pits seems logical enough; however, historians have had difficulty determining the validity of this story. Early Utahns also commonly used pits covered by wooden doors in cellar floors for cold storage. Moreover, there



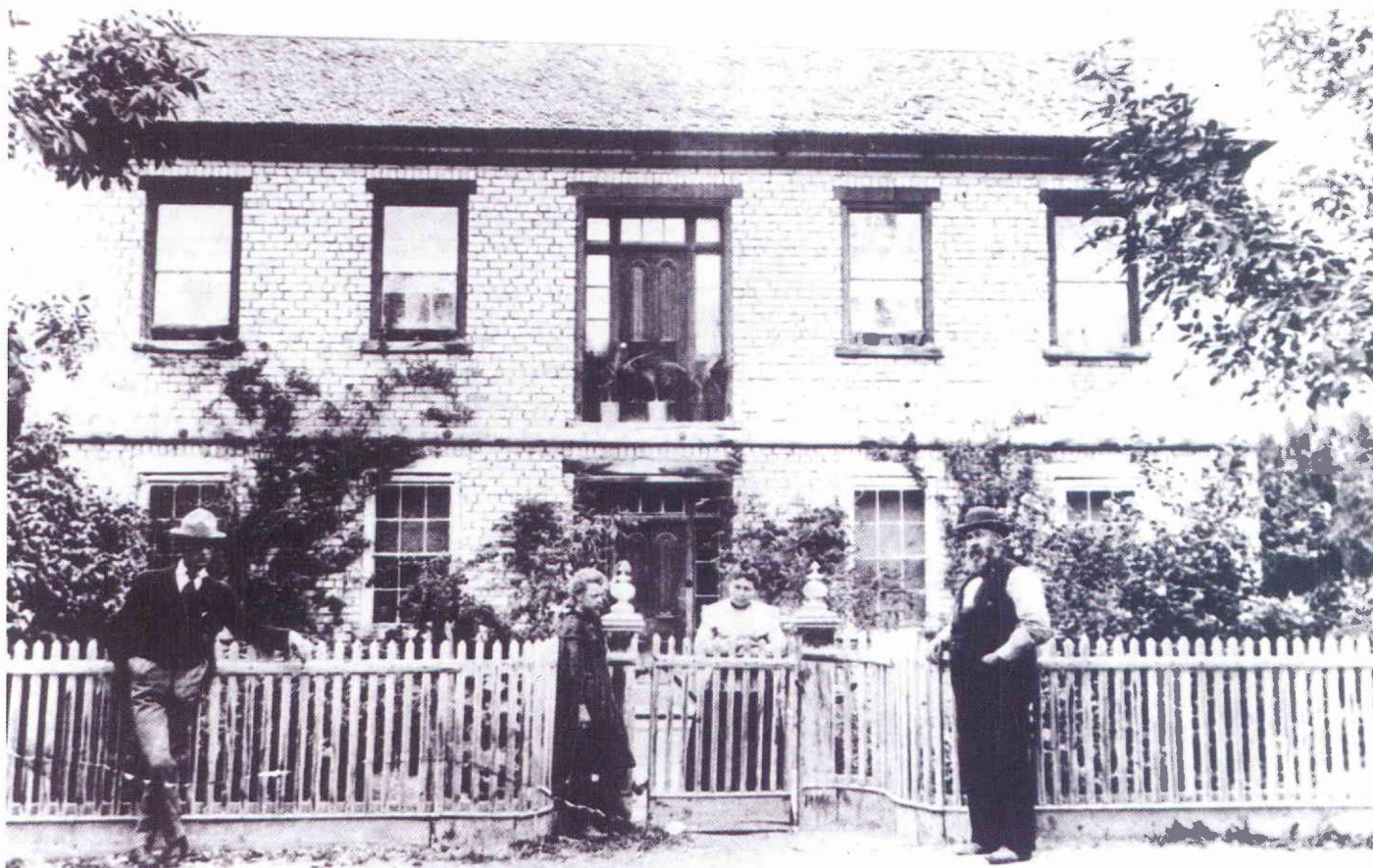
The Frederick & Anna Maria Reber House in Santa Clara was constructed in the mid-1860s. The house has two doors, but Anna Maria was Frederick's only wife.



Built in 1869, the George Washington Baker House in Mendon is another example of a double-cell house that did not house multiple wives.



The c. 1869 Canute Peterson House in Ephraim is reputed to have two polygamy pits dug in its floor where Peterson could hide if federal marshals sought his arrest as a polygamist.



The Jens Christian Jensen House in Ephraim (demolished) featured an ornate angel door with a Federal Style door surround. The nailer board directly below the doorway running the full width of the house may have once supported a porch roof.

are no known primary written records of the construction or use of polygamy pits. Like most folklore, the stories about them have been passed down through oral traditions. A few purported polygamy pits have been examined by historians with inconclusive determinations.

Folklorist and architectural historian Tom Carter, however, believes he may have found a polygamy pit in the Canute Peterson House in Ephraim. The Historic American Building Survey drawings of the house note two polygamy pits, one to hide Peterson and one to serve as a more conspicuous diversion. According to Carter, the pit under the floor of the rear parlor was just big enough to contain a single person and seems impractical for any other purpose. It also seems likely that Peterson would have been a natural target for arrest since he was prominent in Sanpete County religion and politics, had three wives, and lived in one of the largest houses in the valley. This is one case where the evidence tantalizingly suggests a polygamy pit dug specifically for hiding a polygamist.

So what is the verdict on polygamy pits? Although it is possible the pits were excavated to conceal a wanted polygamist, most of them were probably dug to preserve food items. It is also possible the pits were used for both purposes. Lacking sufficient evidence, the jury is still out on this case.

Doors for Angels or Armoires?

Like the double-cell house with two front doors, another arrangement of two front doors is surrounded by Utah folklore. In this case, one of the doors leads to nothing but thin air. These so-called “angel doors” or “angel landings” are found in most areas of the state, particularly in rural towns retaining many of their original residences.

Angel doors typically occur on early classically-influenced homes with symmetrical façades featuring a central door flanked by one

or two windows on either side. On the second story, windows are arranged over the lower-level openings. However, on houses with angel doors, the center upper-story window is replaced by a door. The odd thing about these doors is there is nothing to stand on once you step outside.

Why would a builder go to the trouble of putting in a doorway where it serves no apparent purpose? The name “angel doors” implies that these doorways were a portal through which heavenly messengers could enter a house. However, we don’t know of any recorded accounts of these visitations, so this use of angel doors remains in the realm of legend.

Another story about angel doors claims polygamous husbands used them to evade federal marshals during the polygamy raids of the 1880s. The husband would hide in the upper story of the house and, when the marshals ascended the stairs, jump from the doorway to the ground below to escape. While it is possible angel doors were used as an escape route, it is not likely they were constructed for this purpose.

The two explanations we know of for the construction of these doors are both rather utilitarian compared to the folklore surrounding them. The first and most obvious use is as a means of accessing a porch roof terrace. Covered porches became much more prevalent and elaborate with the rising popularity of Victorian-influenced architecture in Utah in the 1880s. On larger, two-story houses, the roof of the porch often served as a terrace. Frequently, the terrace was accessed through a second-story door.

Where are these porches today? Some porches were never built, usually because of lack of money or time. In other cases, the porch became deteriorated and was removed and never replaced. With a little detective work, you might still be able to see signs of the existence of a porch in the past, or the owners’ intention to build one

eventually. If you look closely at early brick and stone houses you might notice blocks of wood imbedded at intervals above the doorway and perhaps over the windows as well. These blocks are called “nailers” and were placed in the wall to allow a porch to be attached to the house. So if you see an angel door on a house with nailers, it’s a safe bet the door accessed (or was intended to access) a porch roof at one time.

What about houses with angel doors but no nailers? There is another practical explanation for angel doors: to facilitate bringing furniture to the second floor of a home. Many homes of this era had narrow hallways and steep, narrow staircases. Moving even a small sofa or dresser up to the second floor would have been difficult at best, especially when making a tight turn on a stairway. An exterior door that opened directly into the second-floor hall was very convenient. Families could have hoisted furniture up to the second story with a block and tackle attached to an armature and then brought it through a wide exterior doorway into a hall or room.

Exactly when the terms “angel landing” and “angel door” originated is not known, but it was probably not when these houses were constructed. It is highly unlikely the people who built these doorways thought about receiving angelic hosts in their home. Perhaps those who started using the terms didn’t mean it literally; maybe it just seemed an appropriate description for a second-story door that leads to nowhere. So the folklore around angel doors does not reflect their original uses. But, who knows, maybe there were other uses for these doors, practical or mystical, which we don’t know about yet.


The stories we tell about Utah’s early architecture probably say more about us as Utahns than they do about our buildings. As a folklorist will tell you, folklore helps a group maintain its identity and pass on a shared way of life. These stories, more than our buildings, set us apart from other Americans. And whether your ancestors crossed the plains with a handcart or you just arrived in Utah last month, it’s fun to share an “insider’s knowledge” that helps bind us together and make this place feel special. So the next time guests come to visit, be sure to show them some angel doors and tell them all about how polygamists used to hide in pits.*

Cory Jensen received a MS in Historic Preservation at the University of Utah and worked as a preservation consultant documenting buildings throughout the state before joining the staff at the Utah State Historic Preservation Office in 1998 as the National Register and Survey Coordinator.

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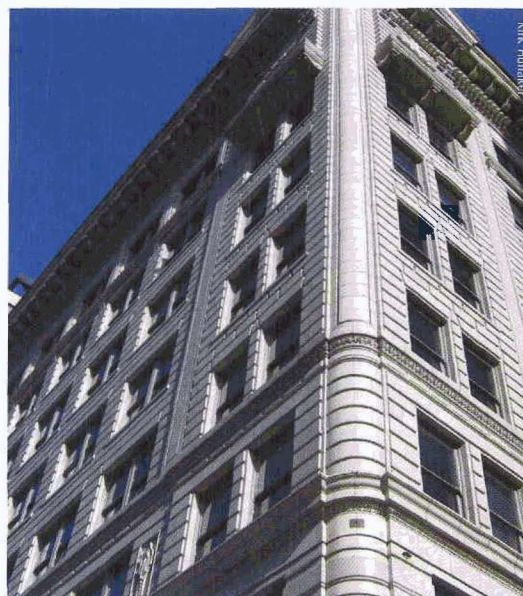
The 1889 George H. Wood House in Cedar City (demolished) is an unusual example of a small, single-cell house with an angel door. The Wood family probably planned to double the house in size.

Courtesy Utah State Historical Society

Utah Architect Remembered: Slack Winburn / By Kirk Huffaker



The Mayflower Apartments, SLC



Clift Building, SLC

Slack Winburn (1895-1964) practiced architecture for over 40 years in Utah and Idaho designing elegant buildings that are still admired today. Winburn grew up in the Twin Falls, Idaho area. As a young man, he served in France during World War I and later attended the Ecole des Beaux Arts in Paris to study architecture. Upon returning to Utah, Winburn worked in the office of prominent Salt Lake City architect Walter Ware. However, he soon set up his own practice. Although Jack Chesbro was his partner early in his career, and his son, David Winburn, worked with him toward the end, Winburn spent the majority of his career as a sole practitioner.

Winburn's career falls into two distinct halves: commissions before 1930 and commissions after World War II. Between 1930 and 1946, it is difficult to find documentation of any work done by Winburn. Because of the collapse in the construction industry caused by the Great Depression, there was very little design work to be had during this period. However, in 1934 Winburn did participate in writing a study on water resources in Utah supported by the Federal Emergency Relief Administration, a New Deal-era program.

Winburn was never beholden to one style of architecture. He believed a beautiful building combines "a logical plan and practical exterior in such a way that in form, outline, and color, the beholder is inspired beyond what the eye beholds." During a distinguished and eclectic career, he designed apartment buildings, churches, commercial buildings, private residences, theaters, and monuments. His work covers an amazing breadth of architectural styles. His classical training helped him create refined Period Revival-style designs which were very popular with clients. His adaptability to new situations helped him experiment with modern architectural forms in the second half of his career.

Winburn designed buildings that have stood the test of time and are still relevant to our lives and our communities today. The elegance of Memory Grove Park's entry gates and World War I monument greets visitors with respectful grace. The Elaine Apartments (440 East 300 South, SLC) is noted in *Utah's Historic Architecture* as one of the best examples of a garden style apartment building in Utah and is still a great place to live. (I should know after living there for two years.) Other prominent buildings that represent some of Winburn's best work include The Charleston Apartments (1300 East and 500 South, SLC), the SLC Public Safety Building (200 South and 300 East, SLC), and the Clift Building (Main Street and 300 South, SLC).

"The smallest cottage has as good a chance of being good architecture as the skyscraper or state capitol," Winburn wrote. Take a moment to examine some of Slack Winburn's buildings next time you are in Salt Lake City. You will see his devotion to "good architecture" in each one. *

Winburn's major commissions included:

Clift Building, SLC
(1920 with Jack Chesbro)

Capital Theater, Logan (c. 1920)

World War I Monument and Entry Gates,
Memory Grove Park, SLC (c. 1925)

First Unitarian Church, SLC (1926)

The Elaine Apartments, SLC (1927)

The Mayflower Apartments, SLC (1927)

Kimball Garage, Park City
(1929) (currently the Kimball Art Center)

Boulevard Gardens, SLC (c. 1929)

University Gardens, SLC (1947)

The Charleston Apartments, SLC (1950)

First Security Bank Building, SLC
(1955) (Served as local architect on the project.)

Ballif Hall, University of Utah, SLC (1956)

Pacific Northwest Pipeline Building, SLC (1957)
(currently SLC Public Safety Building)



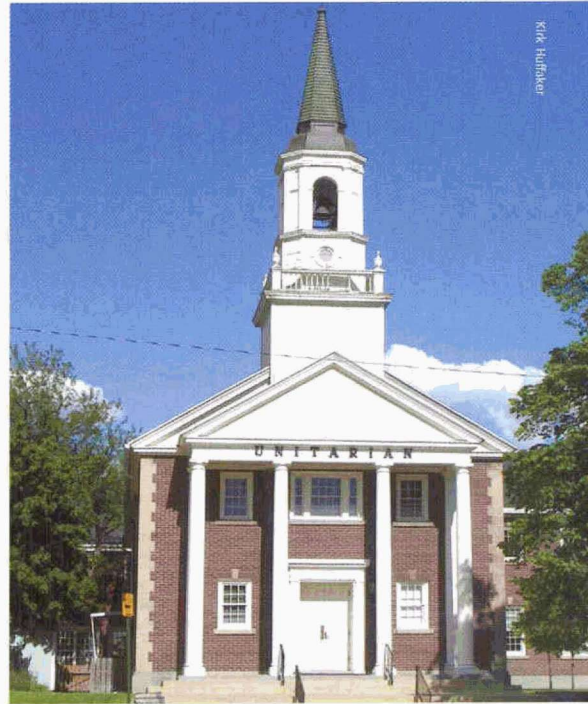
World War I Monument, Memory Grove Park, SLC



Elaine Apartments, SLC



The Charleston Apartments, SLC



First Unitarian Church, SLC



Northwest Pipeline Building, SLC (SLC Public Safety Building)



Ballif Hall, University of Utah, SLC

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